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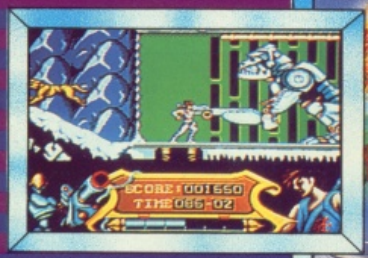
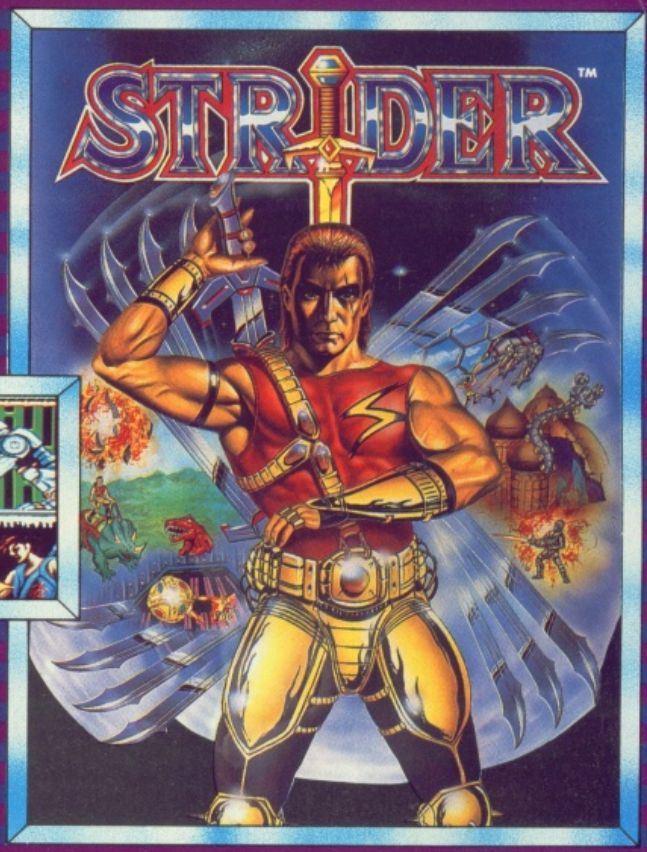


Screen shots from various formats.



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Pepe Moreno, New York cartoonist, contributor to *Heavy Metal* and *Thunder Cats* (amongst many others), is designing the ultimate **interactive comic experience.**

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Not content with *Platoon*, Ocean are now **storming into Vietnam** with *The Lost Patrol*. ACE followed them **into the jungle.**

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X-Out – first of a new breed of shoot-em-ups and a long, long way from Invaders.

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This month's no-holds-barred reviews include the surprisingly good *Pro Tennis* from Ubisoft and the surprisingly disappointing *Harley Davidson* from Mindscape. And we've introduced the new 1990's PIC technology to make ACE's reviews pages look even better than ever.

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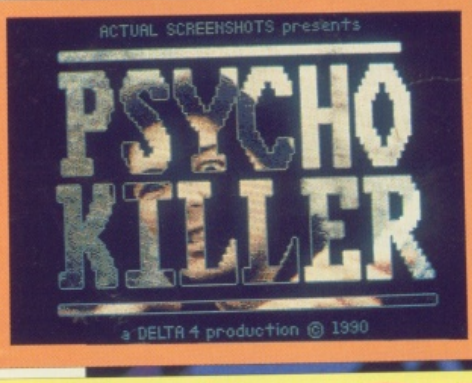
HYPER HORROR!

Fergus McNeill used to struggle with *The Quill* to produce home-brew text-and-graphic adventures; now he tramps through woods with a video camera and a dagger, creating scenes for his first hypergame: *Psychokiller*, programmed using CRL's EGADS generator. Find out more on page 11 and pages 61/62.



WIN A VCR

To celebrate the launch of *The Lost Patrol*, Ocean are giving away a free

APOCALYPSE NOW...

It's started. Games-programming technology is reaching critical mass. The Big Software Meltdown is about to begin...It's all to do with the development of hypermedia and its games derivative: the hypergame. You've already read about Cosmic Osmo in ACE. Now you can check out:

- **Pepe Moreno, *the New Yorker whose interactive comic is living proof of his claim that digital data is the entertainment medium of the future.***
- **The theories and facts behind hypermedia, *CD-I, DVI, buttons, and much more in the ACE Hyperguide***
- **The beginnings of the UK software revolution: *which companies are leading the race to develop new games technologies?***

And if that's not enough, just wait till next month, when we bring you exclusive location reports direct from the USA in a bumper American Issue.

BAT-FANTASY!

Many thanks to DC Comics for helping us arrange our interview with Pepe Moreno in the US. *Batman: Digital Justice*, the comic, will be available in the UK in February; the Macintosh CD-ROM versions should be out later this year. The CD-I version awaits a suitable hardware platform to perform: watch this spACE.

All Batman artwork © DC Comics 1989

HYPER ISSUE!

HYPERCONFUSED?.....57
Somewhere, someone is pouring **millions of dollars** into the development of games that will soon **take over the world.** Find out why, what, where, and when...

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TRADE SECRETS.....54
If you've got *Chase HQ*, **put your foot down** and head for the first of ACE's **in-depth playguides**...

BLOOD TRANSFUSION.....77
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Flaming fury. Pat Winstanley braves the **RPG inferno** of *Dragons of Flame*.

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Land ho! Ocean finally launches the **superlative *Rainbow Islands***; *Hard Drivers* get extra tracks; plus all the latest whispers from the world of **advanced computer entertainment**.

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IN THE PINK.....91
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OCEAN GET IT TAPED – P31

VCR – AND a great collection of 'Nam movies. Grab a pen and get yourself into the jungle.

GRAVITY

Available soon on ST and Amiga

Screenshots from ST version

In 2320, interstellar travel has become as commonplace as Intercity, and man's mission to colonise the universe is well underway.

But then the Outies appeared. No-one knew where they came from, but it was obvious what they were after . . . energy — and they'd stop at nothing to get it. They favour charged Black Holes. And they just turned your latest colony into one. But this galaxy's not big enough for the both of you.

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Gravity designed and programmed by Ross Goodley. Visuals by Pete Lyon.

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ACE NEWS

PLAY BATMAN ON CDI, WORK FOR ACE, OR HELP DESIGN A GAME...

BATMAN ON CDI

An ACE exclusive by Rik Haynes in New York

Batman Digital Justice © 1989 DC Comics Inc. All Rights Reserved

Warner Bros. and Sony are currently negotiating a deal to produce DC Comics' – a subsidiary of Warner Bros. – new cyberpunk *Batman Digital Justice* comic on CDI. The agreement may also include other Warner Bros. CDI projects in the future, which could be tie-ins with Prince music, Clint Eastwood *Dirty Harry* movies or *Time* magazine – all of which are a part of the giant Warner Bros. corporation.

The completely computer-generated *Batman Digital Justice* comic book is available in the stores later this month, and its creator Pepe Moreno is currently working on an interactive CD-ROM version for the Macintosh and PC. Amazingly, these hypercomic versions will use the same data as their paper parent, Moreno explained to ACE: "it's all digital data, and digital data is very easy to manipulate. Digital is the art medium of the future."

ACE visited Pepe Moreno at his Manhattan studio in New York for an exclusive interview with the person who "sells the future to corporations", the creator of the world's first hypercomic – the article starts on page 23. For a full explanation of CDI and hypermedia turn to page 57.

AT THE END OF THE RAINBOW...

Ocean is releasing the home conversions of the fantastic *Rainbow Islands* Taito coin-op later this month on all major micro formats.

This 934-rated sequel to *Bubble Bobble* was written by Graftgold for Microprose last year – the ST version was reviewed back in ACE 24. Unfortunately for Microprose the original deal with Taito fell-through and it was unable to release its excellent micro conversions.

Now Ocean has signed an agreement with Taito securing the home computer rights to the game, and has bought Graftgold's *Rainbow Islands* computer code from Microprose for an 'undisclosed sum' rumoured to be in the region of £50000.

Ocean looks for another pot of gold

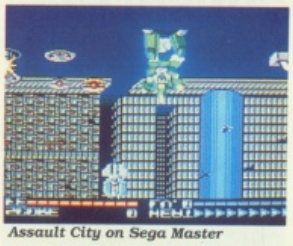
ACE NEEDS YOU!

How would you like to experience the thrills and spills of working on ACE under the Project Trident job placement scheme? We're looking for a talented, enthusiastic and friendly young person to help us in all areas of magazine production, from administration to journalism. The ideal candidate will be able to learn quickly, work under their own initiative and under pressure, and possess an in-depth knowledge of Advanced Computer Entertainment. Get writing to: **ACE PROJECT TRIDENT, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.**

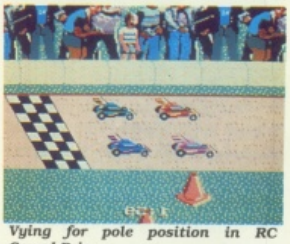
SEGA SURPRISES

Sega has launched two new controllers for its Master 8-bit console. The Handle Controller is a matt-black twin-handled deck with rapid fire switches for £39.95. The £9.95 SG Commander is an upgrade for the normal control pad with an added rapido slider. Sega Master owners can also look forward to three new games: *Assault City*, *Slapshot*, *RC Grand Prix* later this month.

Get a handle on Sega's new controller



Assault City on Sega Master

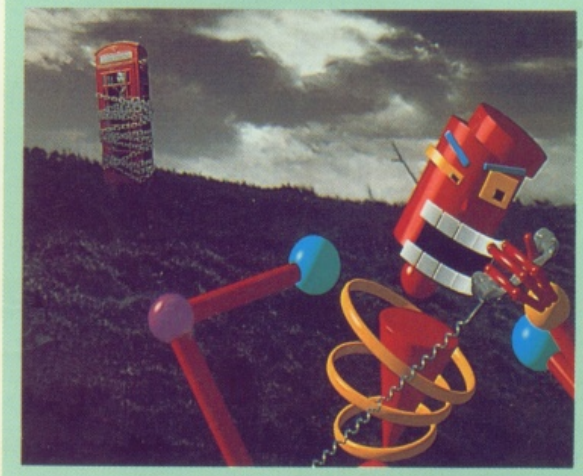


Vying for pole position in RC Grand Prix

Sega Master Slapshot, 'hope it's as good as the Paul Newman movie!

SYMBOLICS SIZZLERS

The ACE newsdesk – which doubles up as Rik's desk for all but the day we go to press – recently had the pleasure of receiving a stunning brochure from Symbolics. This company provides professional 2D+3D graphic animation systems to the likes of TV and advertising companies. So just feast your eyes on what its systems can produce...



GOTTA VIDEO, WANNA CONSOLE?

Action Screenplay, the video magazine, is releasing a £9.95 VHS video buyers-guide to consoles including the Nintendo NES, Nintendo Game Boy, Sega Master System, Sega Megadrive, PC Engine, Konix and Atari Lynx gamedecks.

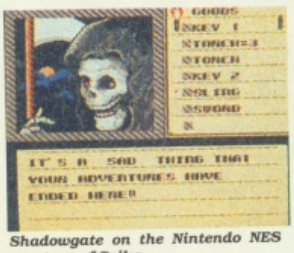
ACE IN USA

- Check out page 18 for a full report on the US Winter CES show in Las Vegas.
- Sega is rumoured to be working on a handheld console in direct response to the phenomenally successful Nintendo Game Boy, the newly-launched Atari Lynx and

Golden Axe on the Sega 16-bit Genesis console

the just-announced NEC portable-PC Engine handheld consoles. The Sega console could have a wealth of excellent Sega coin-ops converted to it immediately like *Out Run*, *Space Harrier*, *Power Drift*, *Afterburner* and *Galaxy Force*. No price or release details are currently available.

- Atari Corp. and Atari Games, the computer and coin-op companies that split in 1984 when Warner Bros. sold Atari Corp. to Jack Tramiel, have got back together in a deal to convert Atari Games' Tengen coin-op titles to Atari Corps. Lynx handheld colour console. Confused? You shouldn't be. What this boils down to is forthcoming Lynx conversions of *Hard Drivin'*, *STUN Runner* and *Cyberball*. Other possible conversions could include a regular 'whose who' of coin-op classics: *Gauntlet*, *Road Blasters*, *Star Wars*, *Empire Strikes Back*, *Return of the Jedi*, *Indiana Jones and the*



Shadowgate on the Nintendo NES courtesy of Seika

ACE ON THE TUBE

A scary solid polygon in Amiga Castle Mania

On a warm winter's day, Steve and Rik head out for Putney to visit the domain of Domark – and the local Malaysian restaurant...

Domark has a string of new multi-format releases due out over the next few months: *Klax*, *Escape from the Planet of the Robot Monsters*, *Cyberball*, *Hard Drivin' Extra Tracks*, *The Spy Who Loved Me*, *Wings of Fury* and *Castle Master*.

Featured in the ATEI show report on page 64, *Klax* is Tengen's latest coin-op release, a pseudo-3D *Tetris*-inspired 'tic-tac-tile' game. The interesting aspect to this Domark release is that it's the first time a coin-op developer has handed over a coin-op conversion to a software company, six months prior to the coin-op's general release. Thus the coin-op and computer versions can go on simultaneous release.

A Domark spokesperson told ACE: 'I think this shows the level of co-operation between us and Tengen'. Other Tengen titles coming out soon are *Cyberball*, a futuristic 21st Century version of American football played by giant robots 20ft tall by 8ft wide – and *Escape from the Planet of the Robot Monsters*, a B-movie inspired arcade adventure with the cutest Shredded Wheat sprites we've ever seen!

Also on the Tengen label will be the imminent release of the PC and Archimedes conversions of *Hard Drivin'*. Domark is also bringing out *Extra Tracks* for the 16-bit versions of *Hard Drivin'*, no price has yet been set but they're likely to be in the region of £10-£12.

'2-4-6 hike', the Twits are back and they're lean, mean killing machines

Escape from the Planet of the Shredded Wheat, sorry Robot

...and on the Spectrum

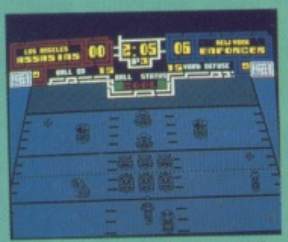
Following in the Domark tradition of James 007 Bond computer games, early summer will see the micro-incarnations of The Spy Who Loved Me movie. The multi-stage arcade game approach will probably be used again.

Set in the Pacific War during 1944, *Wings of Fury* is the new Broderbund game from the States. You pilot an aircraft carrier-based Hellcat fighter bomber on a mission to knock out Japanese island installations in the surrounding 'warzone'. In-game play consists of the normal horizontally-scrolling shoot'em-up formula enhanced by the novel approach of switching between long-shot and close-up views of the action.

Domark is set to release other Broderbund games during the first half of '90, and following the success of the *Fantavision* Amiga graphics package (reviewed in ACE 27), The company also has plans to launch more utilities in the future.

Last , but by no means least, comes the first game from the Domark/Incentive deal featured in last month's news pages. Castle Master is newest Incentive epic 'freescaping' arcade puzzle adventure, now incorporating 3D solid polygons to spice up the logical thinking.

All these Domark games will be out for the Spectrum, C64, CPC, ST, Amiga and PC in the near future.



Spectrum Cyberball on 15th yardline

Hellcat for leather in Amiga Wings of Fury

Head to Head action in the coin-op version of Klax

Nintendo Game & Watch systems from Micro Games USA

Temple of Doom, *Super Sprint*, *Vindicators*, *Xybots*, *APB*, *Road Runner*, *Escape from the Planet of the Robot Monsters*, and *Rolling Thunder*.

• *Mean Streets* is a tasty-looking VGA PC graphic cyber-adventure set in the year 2033 from Access '*Leaderboard*' Software. It's also available for the C64.

• Sega has just converted its *Golden Axe* hack'n'slash coin-op onto the 16-bit Genesis (Megadrive) console.

• Seika has brought out Icon Simulation's *Shadowgate* Macintosh role-playing game on the Nintendo NES console.

• *Double Dragon* is being developed for the Nintendo Game Boy handheld console by Tradewest.

• Tengen has released *Rolling Thunder*, *Vindicators* and *Road Runner* coin-op conversions on the Nintendo NES.

• If you buy a pack of 10 Sony 3.5" floppy disks you get a free "interactive demo" of *ABC's Monday Night Football* software game.

• Data East is releasing EA's popular *Battle Chess* on the Nintendo NES.

• The award for weirdest game title in America at the moment must surely be a toss-up between Hudson Soft's *Princess Tomato in the Salad Kingdom* and Kemco-Seika's *The Bugs Bunny Birthday Blowout*.

• Activision is bringing out *Malibu Beach Volleyball* on the Nintendo Game Boy.

• Micro Games USA has launched a range of Game & Watch decks based on some popular NES games like *Super Mario Bros.*, *Donkey Kong Jr.* and *Zelda*.

• CSG Imagesoft is developing *Dragon's Lair* for the Nintendo NES.

BLASTS FROM THE PAST

What happened in the bygone months of March...

1982

• £23+VAT buys your TRS-80 Model I an extra 96 ASCII characters.

1983

• Virgin Games is set up to produce games for the Spectrum, C64, BBC, Atari 8-bit, VIC20, Dragon, Oric and Texas TI99/4A.

• Epson signs up Miss World Mariasela Alvarez Lebron to appear in ads for its printers and HX portable computer.

1984

• Samsung signs a deal with Clive Sinclair to assemble and distribute the ZX81 in South Korea.

1985

• Firebird releases a £2.99 Spectrum compilation tape of the five worst computer games ever written called *Don't Buy This*.

1986

• Activision buys adventure developer, Infocom, for $7.5 million.

• The first batch of Firebird's *Elite* on the CPC contain a bug which makes the game unplayable.

1987

• The Hanover Fair in West Germany sees the launch of the Commodore Amiga A500 and 2000, Apple Macintosh II and SE, and the Cambridge Computers' Z88 laptop computer.

• Thalamus releases C64 *Delta* shoot'em-up with superlative Rob Hubbard soundtrack and interactive music loader.

1988

• ACE runs a competition to edit the magazine for the day, and somebody actually applies!

1989

• ACE exclusively reveals the Konix console.

• Games developers Bullfrog admit to using Lego to design the gameworlds in *Populous*.

ACE PREVIEWS

A preview in ACE is more than just a screenshot and a caption: we actually get our hands on the games as they're being developed...

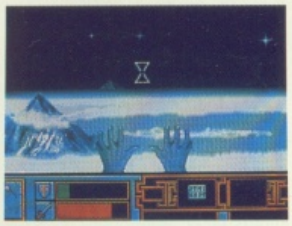
OVER THE HILL AT 21?

Grandslam's coin-op conversion of Sega's Scramble Spirits on the ST

Rob Hill is the 21 year-old programmer of the ST and Amiga versions of *Scramble Spirits* at Teque software development outfit. He originally started out written boring 'C' programs for big biz mainframes, but was made redundant last year. The ST version took him three months to develop, Amiga *Scramble Spirits* took five days! Although Hill immediately mentions the fact that everything – disk loader, keyboard/joystick/mouse reader, text writer, ST program logic, etc – was already "in place", all that needed to be rewritten were some of the graphics and sound routines. The Amiga version runs a lot faster than its ST counterpart – 25 frames a second as opposed to 17. This was accomplished through the use of the Amiga's blitter in the sprite routines. The original coin-op version of *Scramble Spirits* had a max. no. of 4096 sprites on-screen, the Amiga has a max. of 220, and an average of only 40.

ESOTERROR

Ian Harling, the designer of Ocean's *Lost Patrol* (take a look at page 28 for a recon preview), is also working on a fantasy shoot'em-up called *Esoterror*. Some very stunning graphics are supplemented by a spell-driven version of *Space Harrier*! Harling is still working on the crucial gameplay portions of the game and would love to hear your comments and suggestions, write to: Ian Harling, 4 Aberdeen Road, Redland, Bristol BS6 6HJ.



HY-PERFORMANCE

ACE CHECKS OUT TWO PIONEERING HYPERGAME DEVELOPERS

Could the games programmer soon be a thing of the past? ACE meets two development teams who believe that in the future games will be coded by designers, using powerful hypermedia engines instead of machine code and assembler routines.

Fergus McNeill is a name that may ring a few bells. Back in the days when people still played text adventures, Fergus was one of the few game designers to make maximum use of The Quill adventure generator, producing games like *The Boggit*, *Robin of Sherlock*, and *Bored of the Rings*.

Now he's working on *Psychokiller* – Britain's second hypergame (the first into the shops will be *Herewith the Clues* from CRL – see pages 61/62). The game has been created using the same software development system (EGADS) as *Herewith the Clues*, but Fergus faced a far greater challenge. The scenario for the CRL game was already in existence; Fergus had to create his own.

This isn't as simple as it sounds. First, you're faced with similar problems to a film director. Visual material has to be recorded, digitised, and edited into sequences within the game. This involves location shooting, expense, and considerable hassle.

Then you have to change roles and become a sound engineer. For the true multimedia experience, you've got to assemble your sound data (all digitised, in this case). Finally, you take on the role of systems programmer and use EGADS to knit all the parts together.

Of course, all that assumes that to start with you were wearing your script development hat, storyboarding the whole game. Easy, eh?

'No, it's not easy,' says Fergus, 'but the system (EGADS) is good and the potential is enormous. For a long time now, systems have been tailored towards pre-defined finished products, but EGADS is limitless. That's the up side. The down side is that being given so much freedom can be frightening at first – but challenging at the same time.'

'Systems like this are also very easy to use. It only takes you ten minutes to learn – but when it comes to dreaming up the best ways to use the system's potential, the whole process becomes very challenging.'

IT'S A RECORD

Alasdair Scott-Godard, software developer at Pergamon Compact Solutions (PCS – see Guinness panel) and designer on the Guinness Book of Records project, feels much the same way about the new systems.

'You ain't seen nothing yet,' he asserts, 'But the trouble is we don't know what you *are* going to see! Whatever happens, however, we're going to have to rethink from scratch our ideas about computer entertainment.'

Although slow to catch on, the implications of hypermedia for games development are beginning to sink in. Stand by for hyperactivity...

OSMIC FACTS

Games like *Cosmic Osmo* have yet to make a big impact in the UK, but it's only a matter of time. What do they involve? And why are they important?

You can find out more about hypermedia principles in this issue in our Hyperguide on pages 57-59. Basically, however, a hypergame is a product that contains lots of different elements linked together to form a network of video frames, sound samples, textual information, and even discrete machine code modules.

The big letdowns for games enthusiasts at the moment are first the poor animation quality of many hypermedia packages and second the amount of disk storage required to put together a decent product. All that is set to change, however, as soon as CD-ROM becomes more widely accepted. Commodore's recent announcement of an Amiga with CD-ROM, together with the low-cost Headstart CD-ROM PC, are therefore particularlary important for gamesters. We have the software – soon we'll have the technology.

PSYCHO KILLER

Psychokiller is designed to be a nail-biting horror. 'Its a John Carpenter type of game, with slight touches of Hammer', explains Fergus. Your car breaks down in the middle of nowhere and a series of sinister happenings lead to the appearance of a psychotic killer.

Due to a shortage of staff in the casting department, the psychotic killer actually bears an uncanny resemblance to a digitised Fergus McNeill. The game is still under development, but will feature around 100 digitised screens together with numerous digitised sound clips.

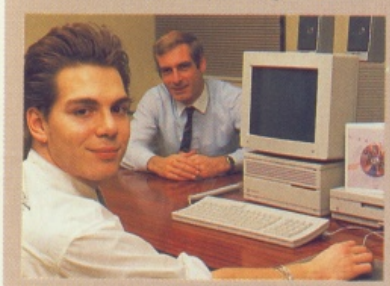
One thing that's missing is animation, since that is yet to be incorporated in the EGADS system. As soon as it is, Fergus hopes to attempt a fully animated hypergame, using 'rotoscope' techniques for the movement. Originally used in the Lords of the Rings animated film, this involves digitising live subjects who are then painted over.

GUINNESS IS GOOD FOR YOU

Guinness Book of Records on CD-ROM – interactive techniques that will soon be used for games development.

Mirrorsoft. Now there's a familiar name, bringing fond memories of some superb US licensed products, including *Defender of the Crown*, *Oids*, *Dungeon Master*, and Imageworks' *Xenon II*. What isn't quite so well-known is that Mirrorsoft share offices with a company called Pergamon Compact Solutions. And they've recently announced the establishment of a new multimedia development laboratory, following a £5m investment from Mirrorsoft into PCS. This could be the most significant news for UK gamesters this year.

Basically, it means that for the first time a UK software company with games expertise will have access to CD-ROM and CD-I expertise 'in-house'. PCS have already pioneered many games-relevant techniques in their interactive version of the Guinness Book of Records. According to Mirrorsoft boss Jim McKonochie, the decision to head for CD technology was '...very similar to the decision we took four years ago to concentrate on 16-bit software. It was a huge risk at the time, but it has paid off. We're making the same decision now to build up our multimedia skills.'



Jim McKonochie and Alasdair Scott-Godard of PCS: forging the future of games software.

We'll be bringing you regular updates on this emergent technology, and its implications for games, during the coming year.

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ACE CONFERENCES

ACE will also be acting as a communications link between you, the readers, and software houses during 1990. We're setting up a series of ACE conferences in which readers will be given the opportunity to meet software houses and talk to them about their games (and you don't have to be polite either!) on an informal basis. Lunch will be supplied and admission will be **free** to subscribers, who will also receive **priority allocation** – a valuable bonus since space at conferences will be strictly limited. Each event will be fully covered in the magazine, so you could get your mug in the mag as a bonus!

InterfACE

Subscribers will receive, completely free of charge, a special quarterly newsletter put together exclusively for them by the ACE Team. This will bring you details of some of the topics that we can't, for reasons of space or secrecy (!), mention in the magazine itself. Subscribers will have the chance to contribute to it if they wish. With ACE every month, and InterfACE every three months, you'll really be at the cutting edge of the computer entertainment revolution.

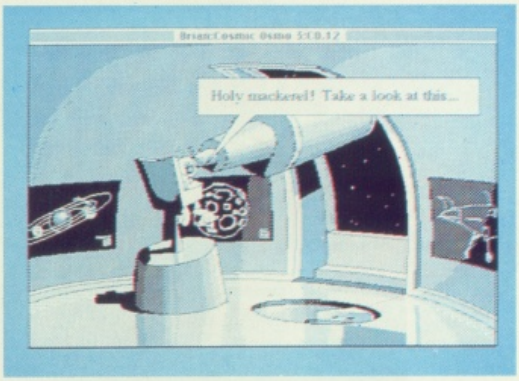
THE ACE

Subscribe – and the ACE Team will plunge you into a maelstrom of discovery and excitement. Reporting direct from the heart of the entertainment inferno, the ACE Team have ensured that their readers have been the FIRST to find out about many startling new developments in the games-playing world. Here's what you've been missing...

THE TRAIL-BLAZING PAST

ACE was launched in 1988 by a small team of **dedicated computer entertainment** journalists. They wanted to produce a games magazine that would, for the first time, appeal to people who really **took their games seriously** and who, like the ACE Team, wanted to go beyond game reviews into the world of **advanced entertainment technology.**

One year later and the magazine was outselling its rivals and being voted **Magazine of the Year.** In recent months, ACE has brought you **exclusive** coverage of:



Hypergames: the game style that began with *Manhole* and *Cosmic Osmo* and is paving the way for CD-I entertainment – defined and described for the **first time** in ACE.

The Flare Micro: the state-of-the-art games hardware that later became the heart of the Konix console: revealed for the **first time** exclusively in ACE

Interactive Compact Disk Entertainment: the Phillips CD-I unit, previewed **exclusively** in ACE and due for release in the next few months at under £1000.

FM Towns: a 32-bit Japanese games monster with a built-in CD-ROM that carries a mean *AfterBurner* conversion and a **staggering technical specification.**

E STORY

pACE setting

One of ACE's prime roles over the next few years is to campaign for wider acceptance and coverage of computer entertainment. We've set up a broadcasting working party to liaise with TV and Radio on behalf of our readers and we'll be keeping you updated on our progress throughout the year.

ACE will also be running a unique reader campaign in early 1990. If you've got a copy of the relevant issue, you'll be able to take part in the largest computer games publicity exercise ever: don't miss it! What's more, if you subscribe, you can take part in person at one of the ACE Conferences: see the Subscribers' Exclusive box for more details....

The ACE Challenge: a £20,000 challenge to the hardware industry to give us a dedicated games machine which can deliver **truly advanced computer entertainment.** The first of the ACE Challengers will be giving us the full spec of their **record breaking micro** in the next issue of ACE.

Interactive Video Tape: a new games standard in the USA that is turning video tape recorders into **powerful interactive games systems...**

...and **much much more...**

THE GLORIOUS FUTURE

By subscribing to ACE, you inherit a **great tradition** of in-depth coverage of computer and electronic entertainment, from the latest coin-op **blockbuster** to **hypergames** and **MIDI music.** Here are just some of the topics you'll be able to catch up on in forthcoming issues:

Born in the USA: an exclusive look at the **latest state-of-the-art games software** currently under development in the States for the new **CD-I and DVI game systems.**

Beyond Tetris: an **ACE exclusive report** from the **heart of Russia** on Soviet computer entertainment.

Inside the Machine: full technical details on the latest generation of **intelligent coin-op consoles.**

Total War: an in-depth examination of wargame **psychology** and the software, both established and under development, that could make this the **fastest growing games area of 1990.**

...plus a host of other exclusive, in-depth articles on the **cutting edge** of computer entertainment.

New fACEs

Ever since EMAP bought ACE, we've been preparing for ACE's best ever year...

We've now got **Steve Cooke**, the original editor who, in conjunction with Pete Connor, was responsible for the early success of the magazine. Pete will be supporting the magazine on a regular basis as a valued freelance consultant.

Steve knows the entertainment industry backwards. Not only was he one of the original Personal Computer Games team back in the early '80's, but he's also involved in script production for stage and film. His knowledge of these other industries will bring ACE readers exclusive highlights in the rapidly emerging world of CD-I and multi-media entertainment.

Rik Haynes

Rik is ACE's deputy editor, and the man who really keeps his finger on the pulse of the computer games scene. He was previously the Reviews Editor for the weekly magazine New Computer Express and his background of investigative journalism will be bringing ACE readers the latest developments in entertainment technology every month, maintaining the magazine's excellent reputation for breaking the biggest stories first...

Laurence Scotford

Laurence was chosen from over 150 highly qualified applicants (including many familiar names in the games business) because, as the new Reviews Editor, he demonstrated to us all that he was not only a highly experienced games player, but also a superb organiser. Each month, he'll be coordinating reviewers from around the country (and even from abroad), bringing you the authoritative reviews you expect from Britain's leading games magazine.

Jim Willis

Now that we've got Jim as our Design Editor, we'll be ensuring each month that you not only get the best coverage, but that the design of the magazine also meets your demanding expectations. Jim's an expert in desktop publishing systems and is rapidly developing an individual style for the magazine using the latest state-of-the-art DTP technology. The way ACE is actually produced makes an interesting topic in itself: you'll be finding out more from Jim over the next few months as he lets you into some of his graphic secrets...

WRITE TO REPLY

MORE THOUGHT PROVOKING FEEDBACK FROM *ACE* READERS

OLD PILOTS NEVER DIE...

In response to Richard Harrison's letter in issue 28, I would just like to say that I also find that *F-16 Combat Pilot* is a rather 'tacky' program with awkward controls. *Interceptor*, although now fairly old, is a far superior game. It may not be such a realistic simulation, but it is much easier to play, with more accessible controls and a short, precise instruction manual which is easily comprehended. The sound in *Interceptor* is much better and the external views of the plane are a good function. I always have found Digital Integration's flight simulations a bit complex, even their first release, *Fighter Pilot* on the 8-bit machines. I am sure that there must be other *ACE* readers with a similar opinion, and that this is not just a minority case.

Robert Stevens, Truro

OK, fair comments. It would appear that we are beginning to identify two groups as far as flight sim fans are concerned: those who want a simulator to mimic the performance of the aircraft as closely as possible, and those who prefer a less realistic (but possibly more accessible) game, with additional features like out-of-cockpit views. There is something to be said for both camps.

...THEY JUST PLAY FLIGHT SIMS!

Your reply to A.Turville's letter on commercial flight simulators (issue 28) was ill-informed and inaccurate.

The problem as I see it is that those who see these programs as boring have missed the approach by a few hundred nautical miles. The **fact** is that the act of flying any aircraft is seldom boring and certainly no game. Faced with a good simulation, which, not being a game, has no stated goal to be pursued, gamers do not have the foggiest idea what to do with it – hence it's boring!

I suggest that A.Turville should go for the Sub-logic simulator... the only simulator remotely near the real thing.

You are obviously unaware of Sub-logic's forthcoming *Arline Transport Pilot* which will include Boeing 737, 747, 767 and Airbus A300.

Tony Green, Hyde

Thanks for your advice, which I'm sure will be of great interest to A.Turville and other readers. It would appear that the time is right for an in depth look at available flight sims by a real pilot. So watch the the pages of ***ACE*** *in the near future for just that.*

ACE MACHINE

In keeping with the present trend of designing a mega computer, here is my design.

This computer is capable of:

- •near infinite storage
- •communicating in a very complex manner
- •supporting itself
- •making its own decisions
- •moving to where it is needed most
- •self repair
- •reproducing itself
- •working for several decades

What an amazing machine that would be to design, although I am sure that very few people would profit from doing so.

David Fairweather, Blackburn

Well done – if you manage to get this off paper and onto silicon you'll be a made man. On the day it's done we guarantee that there will be no typos in ***ACE****, that 16-bit software will be affordable, and that the ad team will be good at* ***Kick Off****.*

REVIEWS REVIEWED!

Here is a chart of your reviews in issue 29:

(1)	*Never Mind*	
	Psyclapse	
	Eugene Lacey	95%
(2)	*The Untouchables*	
	Ocean	
	Laurence Scotford	93%
(3)	*Darius*	
	The Edge	
	Eugene Lacey	88%
(4)	*Iron Lord*	
	Ubisoft	
	Laurence Scotford	86%
(5)	*X-Out*	
	Rainbow Arts	
	Eugene Lacey	84%
(6)	*Indianapolis 500*	
	Electronic Arts	
	Laurence Scotford	80%
(7)	*Conlict*	
	16-Blitz	
	Laurence Scotford	80%
(8)	*Bad Company*	
	Logotron	
	Eugene Lacey	79%
(9)	*Operation Thunderbolt*	
	Ocean	
	Eugene Lacey	77%
(10)	*Mechwarrior*	
	Activision	
	Rik Haynes	72%

Why can't you print more reviews as good as the *Never Mind* review and not like the pathetic *Beverley Hills Cop* one?

I would like to congratulate you on your war games special, I found it very interesting.

I agree with John Wood's letter (issue 29) that each review should have two comments instead of one.

Gerred Blyth, Bath

P.S. Kiwi's Rule

P.P.S. Anyone wanting to join the *Save the Blue Smartie Foundation* phone 100 and ask for Freephone Blue Smartie Ltd.

Thanks for your constructive criticism – I'm sure that a number of software houses will be quite pleased to see the tables turned for once. As regards two comments in reviews, see our reply to Mr.Wood's letter. We haven't entirely ruled out the possibility of trying this at some stage in the near future, however.

COUPÉ CAUTION

Before I start I must congratulate you for producing the best computer magazine currently available. The many articles present a varied, interesting, and unbiased magazine. I am also glad to hear about the new features which are going to be featured soon.

But what I am writing about is the SAM Coupé. By the time you receive this I will probably have recieved my new Coupé, but after hearing about other people's concern for the Coupé I felt I must put pen to paper.

The SAM Coupé seems to be an excellent and awesome machine, but will it be fully exploited? Many companies have promised to support the Coupé, but will we be seeing software from the predominantly 16/32 bit software houses?

The 256k memory should allow far larger and more complex programs to be converted to the Coupé, and it would be good to see high profile classics also converted.

Let's hope that you will review and preview the Coupé's software. I will still buy *ACE* because of its superior, mature journalism and quality articles. I would be interested to hear your response as I view your responses as good advice that I can trust.

Jason Smallwood, Yorkshire

Thanks for your praise – we are glad you are enjoying the magazine so much. If you check out the pages this month you will see that some of our promised new features have already been implemented – more are on the way.

I can understand your concern about the Coupé, but to be perfectly honest with you, it is

not really possible to predict exactly what the response to the machine will be like. The first thing to bear in mind is that the machine's Spectrum compatibility means that there are literally thousands of extremely good games already available for the machine, and many more being released each month.

Of course, if you wanted a Spectrum you would have bought one, and not a SAM. Software specifically written for the machine is not likely to be in evidence (apart from MGT's own packages) for some time. Most companies will probably wait to see how sales of the machine take off before they commit themselves. When that software does appear it is more than likely going to consist of existing Spectrum titles which have been souped up to take advantage of the SAM's advanced features.

In short then, you haven't got yourself a white elephant, but you are probably going to have to be patient as far as software support is concerned.

THE TEXT ADVENTURE IS DEAD...

Laurence Scotford's comments in the opening paragraph of his *Future Wars* review (Issue 28, p.55) were "...the text adventure seems to have **finally** died a death...". The keyword there is finally, I can just see the massed ranks of arcade reviewers dancing a jig around the office.

Then he goes on to cite Level 9 as an example of the death of adventures! Level 9 have from time to time spoken about their writing arcade games. Their moving away from the genre is for their own reasons, not simply because of the "death" of the text based adventure.

Magnetic Scrolls and Infocom's illustrations are head and shoulders above the graphics of *Future Wars*, and coupled with the text, create a much better atmosphere.

And simpler, more sophisticated interaction? The joy of a text based adventure is finding out **how** an object works, not simply OPERATE-ing it from a menu!

I'm sorry to Delphine/Palace if I'm appearing to be hard on *Future Wars*. I'm sure it is a fine game. What I'm protesting about is the feeling that computer software must gravitate towards the centre. I can only hope this letter will start a debate as to what kind of industry we want, whether we want a choice of games with their own peculiar divisions of style, or whether we wish to follow the doctrine of "one style, one product, one customer".

Martyn Westwood, Interactive Technology

*•Firstly Martyn, I think you do reviewers a slight disservice to imagine us leaping about the office celebrating the demise of the Text Adventure. My comments in the review were intended merely as observations – **not** as a personal expression of relief. I agree with your comments on the qualities of text-based games (I have enjoyed many myself), but I also feel that games like **Future Wars** have opened up the genre to a lot more people. What do other readers think?... Meanwhile here is a lament for Level 9.*

...LONG LIVE THE TEXT ADVENTURE!

What a disaster! Level 9 is about to bury their much praised text-adventures! Adventures with great plots are selling adventures! How about trying a different approach Level 9?

Jay Lee, The Netherlands

Jay, we couldn't agree more. Having said that we anxiously await Level 9's future arcade style releases.

SINGLE-SIDED BLUES

Don't you think it is time that someone, either software companies or magazines, found out how many single sided disk drives there are still being used on the ST.

As the games get better and are taking up more disk space it is now leading to unacceptable levels of disk swapping.

Surely by now even those people with single drives have upgraded to a double drive.

If the software companies made their programs on double-sided disks they would save thousands of pounds on blank disks, and may be able to bring the price of the software down because of it.

I bought a copy of *Police Quest II* and it had three double-sided disks in it and a note from Sierra asking the people with single-sided drives to send for six single-sided disks – now doesn't that sound a better system.

P.Hall, Harleston

I am sure that there are many, many ST owners who sympathise with your points. Almost every month we look at software which is ruined by the amount of disk swapping that becomes necessary.

You might be very surprised, however, at the number of single-sided STs that are still in use. Remember that it costs at least £60 to upgrade an internal drive – and that is if you buy the cheapest available unit and fit it yourself.

Yes, Sierra's system is quite a good idea, but think how frustrating it would be for single-sided owners to have to do this every time they purchased a game.

Unfortunately there is no easy solution to the problem, so it looks like both camps will have to grin and bear it.

SHORT 'N' SWEET

A few of the best zany bits...

Sprite Redundancies
Here are my specs for my ideal games machine... ...2 Sprites: a ninja and a spaceship.

Steven Hopkins, Leighton Buzzard

Could this, we wonder, be an oblique comment on the current state of games software?

The man with no name
It's me again – the nameless one who sent in the top ten ads last month. I was wondering, could you please print my name next month, as my friends don't believe it was me! Please...

Simon Howard, Cornwall

'Tis done, oh nameless one!

Twelve year old genius?
I am twelve, own an Amiga 500, and in my spare time use it for my new hobby which is Chaology, and have written a number of programs... Not all twelve year olds have a one bit brain.

Matthew Crocker, Kent

*Chao... what? Shouldn't you be reading **New Scientist**? You do? Oh... ok!*

Probably the best reviewing system in the world!
I was suddenly struck by a totally new idea for reviewing games... make, say, fifty copies of the latest releases. Then send these copies to unbiased and trustworthy people and get them to rate the game...

Matthew Kearsey, Gravesend

Find me fifty unbiased and trustworthy people (some hope!), and you're on!

Sanity?
Doesn't the seriousness of computers make one want to shove a chip up your nose and say "LEAVE ME ALONE I'M A BORN AGAIN CHIP BUDDY"? Well no, me neither but it passes the time!

Paul Naylor and Nevil the Egg, Mansfield

What on Earth are you on about?

The Big 10!
...as we look ahead to a future lined with consoles and 32-bit computers, I say "Well done everyone, on a great decade of computing. may the show go on!"

Mark Russell, Southport

Hear, Hear!

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- COMMODORE SHOW NEW AMIGA BEHIND CLOSED DOORS

At the dawn of the new decade, manufacturers from around the world gathered in Las Vegas to announce the latest, greatest, smallest, fastest, largest, noisiest goodies for the techno-freaks of the '90s. John Cook survived to bring you this report...

Imagine wandering around 18 aircraft carriers (that's a mind-numbing 800,00 square feet) surrounded by the weird and wonderful offerings of no less than 1,400 major exhibitors. It's hell but, if you like it hot, hell is where you have to go.

What's Consumer Electronics? Pretty simply, if Dixons sell it - it probably qualifies : Telly, Video, Audio, Cameras, Office Equipment, Keyboards.....and Computer Software and Hardware. And it's big, BIG business - with total over the counter sales of about $43 Billion in 1989. That's a lot.

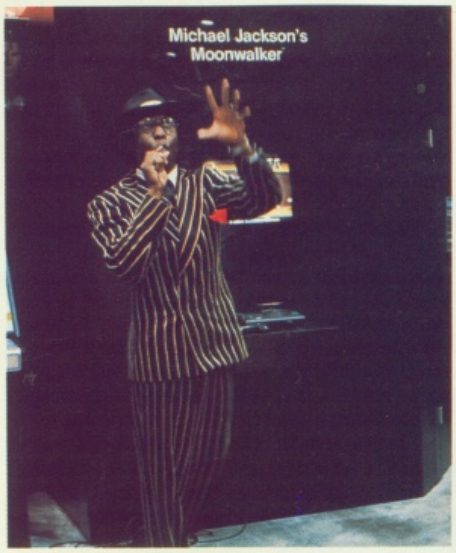
Of that, around $3.4 Billion was accounted for by the home video game industry. That sounds none too bad until you realise that $2.7 Billion of that was generated by the Nintendo system alone. The balance of the figure is made up of Sega and Atari ROM based sales - with entertainment software on floppy for other systems coming in at around the $300 million mark.

On the face of it, that's enough to send the average Advanced Computer Entertainment consumer heading straight for the sick bag - I mean, who the hell takes the bog standard Nintendo seriously as a state-of-the-art entertainment machine?

Judging by CES, everybody does. Nintendo drove home its dominance in this market by occupying almost half of the available space in the West Hall of the convention centre, where all the entertainment software exhibits were housed, the next biggest stand being that from Sega, followed up by that from NEC. Nintendo, Sega, PC Engine/TurboGrafix. The message? ROM rules, or at least that's what it looks like for the immediate future. In the words of one the MD of one UK software company, "looking around here, you wouldn't think home computers existed!"

Does this mean we are all doomed to be playing *Super Mario Bros XII* in years to come? Whatever happened to innovation, technical excellence and hoopy graphics and sound, you might ask? Well, the underlying message for those with their ears to the ground at CES was not as pessimistic as it might first appear.

The consensus is that optical disc technology - CD Rom, etc - are going to revolutionise the home entertainment sector. But not just yet. The only home machine packing a CD right now is the TurboGrafix, but there are many others on the verge of release - the Philips CD-I system for starters, several MS-Dos systems aimed at the home market, plus the enigmatic Amiga with a built in CD Drive, unveiled by Commodore to selected developers (i.e. anyone who cared to turn up) behind firmly closed doors.



Michael Jackson hits the Sega stand.

Super Monaco Grand Prix *on the Genesis shows off the power of the system as convincingly as the coin-op original showed off Sega's increasing technical dominance of speedy 3D routines.*

Only a fool (and they exist!) would maintain that machines such as these will not make a huge impact in the home market - with 600 MBytes to mess around with, you can store a whole bunch of very hires graphics and CD quality sound that cannot fail but impress Joe Public (whose **letter** appears elsewhere in this issue.

NINTENDO

Nintendo rules, OK? That was the message that was brutally rammed home at this show. Nintendo estimates to have sold around 26 million NES machines (Nintendo Entertainment System) in the US in just over three years. It's in 22% of US households and intends to increase that figure to 29% by the end of 1990. The company is spending $30 million in advertising in the first half of 1990 alone, to that end.

The NES is simply a phenomena, which with the immediate success of the Gameboy, might well become a self perpetuating dynasty.

There was much new software for the Nintendo and it was generally agreed that the standard of programming and graphics had improved significantly over the past year. What disappointed many, however, was the lack of imagination displayed in the majority of the titles. How many variations on *Super Mario* and *Castlevania* can there be? The answer is - a lot.

There is more sophistication at the higher end of the Nintendo ROM market, however. Games such as *Final Fantasy* - an RPG with battery backed RAM in the cart, so you can save your game position. *Shadowgate* - a hit on 16 Bit for ICOM Software - has converted surprisingly well.....rather better than Cinemaware's *Rocket Ranger*.

The UK team who is the big daddy of Nintendo development worldwide - Rare – were also in evidence. The company that was Ultimate Play the Game and mysteriously dropped out of the home computer market at the top have programmed around 40 Nintendo titles since, all for third parties. The guys must surely rate as the smartest (as well as richest) of all UK software publishers and developers alike.

Even beyond video games, Nintendo is firmly embedding itself into youth culture. There's a hit live action adventure/comedy series 'Super Mario Bros.Super Show' airing on 135 stations in the US, plus the animated 'Captain N - The Game Master' . There're movies featuring the Nintendo - 'The Wizard' being the most prominent. You can eat Nintendo breakfast cereal, wear the Nintendo sweat shirts, hats,coats and jeans put on the Nintendo slippers, drink out of the mugs, cups and thermos flasks, sit on the Nintendo furniture and tell the time by the Nintendo clocks.

There's one thing for sure. When Nintendo decide to make the step over the Atlantic with the NES and the Gameboy - rather than the fragmented toe in the water approach taken at present - we aren't half going to know about it.

SEGA

Of all Nintendo's competitors in the US, Sega look like they have got the best act together here and now. With superior hardware in both the Master System and the Genesis, they are hoping, at the very least, to cream off some of the Nintendo market. Marking down the Master System to $70 retail can only be a step in the right direction.

The real hopes for the future are undoubtedly

Out on the town at night – make sure you don't drink too much, or you might get eaten by the tigers in the lobby of the hotel.

In the last quarter of 1989, the Gameboy produced more revenue than the whole of the videogame industry in 1985. One million hardware units sold, three million carts sold. 5 million Gameboys are expected to be sold in 1990.

Wings *from Cinemaware turned a few heads at the show, mixing sprites and 3-D vectors in a novel fashion. It'll be out on Amiga in May, with IBM and ST version following on.*

Into the dogfight in Cinemaware's **Wings** *(running on the Amiga).*

New World Computing had a fun title on the Amiga - called* Nuclear War.** ***With strong cartoon graphics and a zany theme - all based around a 70's card game - it's not to be taken at all seriously and looked like a bunch of laughs.

PORTABLE ENGINE SHOCK

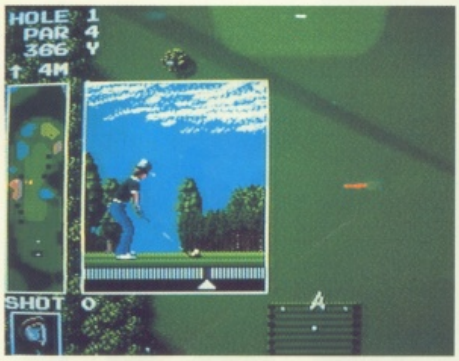
Behind the scenes NEC was displaying the big shock of the show: a hand-held version of the PC Engine.

In a private meeting with selected developers, the hand held was unveiled, in full working order. It undoubtedly blows away all opposition presently around.

Full colour screen about three inches across. True hand held size - about 9x4 inches. Full resolution screen - a true 400x240 display - which would convert to a portable TV with an optional tuner attachment. And the most interesting news of all - fully compatible with existing PC Engine/TurboGrafix software.

The downside? Battery-life, at present only three hours. Price? No announcement - but you'd expect it to weigh in at well over $200. Timing? No announcement of release date.

But it's there, it works - and must be scaring the hell out of Atari. It's also interesting to note that NEC are now the only videogame producers with a system that works in the arcades (there exists a JAMMA compatible board for the PC Engine), is on home console and is also a hand-held.



Power Golf *on NEC's Turbografix system.*

pinned on the 16 Bit Genesis, now with over 350,000 units installed in the US. All Sega needs is the software base to show the machine off, so it's working on the solid base of its own arcade hit titles - such as *Golden Axe* and *Super Monaco Grand Prix* - and a sprinkling of strong licences; Spiderman, Dick Tracey (soon to be a Warren Beatty/Madonna hit movie) and Moonwalker from M. Jackson, esq.

In Genesis, Sega have the most highly specced videogame unit on the market right now, only history will tell if they can even begin to overturn the Nintendo monolith with this performance advantage.

NEC

The TurboGrafix-16 (or PC Engine) is beginning to become a serious contender in the videogame market. In a large booth it was proudly displaying an extensive range of new titles, many of which had not been seen before.

NEC's big launch (apart from the portable Engine – see separate panel) was the announcement of the CD-Rom player for the PC-Engine. On display was *Monster's Lair* with a boppy CD sound track - but more interesting was the Cinemaware production of *It Came From The Desert*, which will overlay live video action featuring real actors with computer graphics in a CD version of the game.

Cinemaware can integrate about 20 mins of video action in with the existing game - and the initial effects looked very interesting indeed. On a separate tack, Cinemaware are also contracted to produce the whole of the TV Sports range for the PC Engine - taking advantage of the multi-player capacity of the machine. Five player TV Sports Football? Yum!

The NEC CD-Rom is the first optical product to make a big splash in the entertainment market - the industry agrees that one day, all games will be made this way - but isn't confident that the PC Engine in its present incarnation is the hardware platform to take it all the way. But it's a leap forward and congrats to NEC and Cinemaware.

ATARI

The fat cats of Atari had elected to take a suite at the Mirage Hotel (complete with white tigers in the lobby!), away from the show floor. There, it was strongly push-

Remember this? Nolan Bushnell's Pong – the game that set the ball rolling in more ways than one.

LIKE, WEIRD, MAN

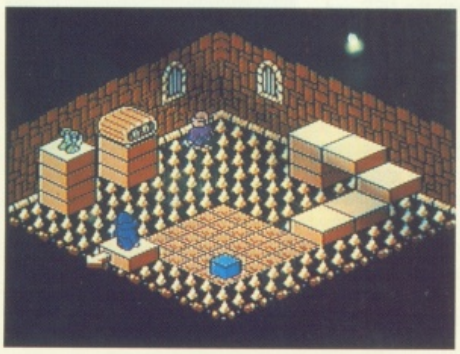
CES isn't just about computer games, of course - walking around the show sometimes feels like attending the biggest jumble sale on earth - with goodies on display ranging from the banal (does anyone seriously want a 5 foot by 3 foot ghetto blaster?) to the truly wacky.

The ACE award for the most seriously off beam product was jointly held this time around, by the Gateways Research Institute and Light and Sound Research Inc.

The advertisement...

Gateways are into serious subliminal programming, with its MindvisionTM series of products. Here's a hint to what it's selling - "Finally there's justification in spending endless hours in front of the TV!" Yup, what Gateways will sell you

The 520STFM was relaunched at a new lower price of $500. Regarded as dead by the game publishers, the ST needs this boost to give it any chance in the US marketplace.



***A number of UK development teams have now become registered Nintendo developers - this is an interesting effort programmed by Software Creations, based in Manchester - a Knight Lore style game called* Solstice.**

...the effect: punters bliss out in a world of synth sound and flashing lights.

Big sounds for Geoff Capes – who else could lift this 5' by 3' monster?

is a black box that fixes onto your VCR and will play a tape of positive reinforcers onto the TV program of your choice.

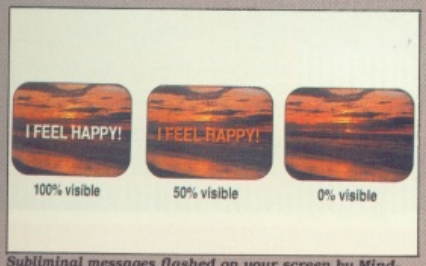
You can control how often the messages are flashed up - indeed you can adjust it so the frequency is just below the conscious-threshold. Now it looks like you're watching normal TV - only, say Gateways, your subconscious is being bombarded with positive messages and/or images of your choice.

Don't giggle. When subliminal advertising was tried out in US cinemas in the 50's, it resulted in vastly increased sales of cola and popcorn - even 'though the audience didn't realise what was going on. Spooky, huh?

TUNE IN, DROP OUT

Much sillier is the MC2 which comes as a kind of New Age walkman. Imagine a walkie with built in shades. Shades that block out the light from outside and generate patterns designed to relax you. Combine that with some far out synth music coming at you through the cans and you get the idea of MC2. I have no idea if this does you any good or not, but watching rows of execs sitting around in deck chairs, just tuning in and dropping out had to be the most bizzare sight of Vegas CES.

This little box can take control of your mind and turn you into drooling slave to technology. That's the techno-phobic view. Gateways, however, reckon it's '...the most advanced audio visual subconscious programming in the world'.



Subliminal messages flashed on your screen by MindVision can be visible, obscured, or completely invisible.

Pinbot *running on the NES*

ing the Lynx hand-held with reports of very promising test marketing in the New York area around Christmas, with the full allocation of 70,000 sold.

Tramiel claims they'll sell another million in the next year. It's fair to say that the industry is sceptical. Being the only colour hand-held was a big plus - now NEC have spoilt that (deliberately and quite savagely) with the bonus of, on launch, having an established software base of PC Engine software.

Is anyone going to shell out for a Lynx knowing that the NEC machine is around the corner? More likely, they'll buy a Gameboy while they await developments.

COMMODORE CD-ROM

Commodore was giving nothing away at its modest show floor stand, but in the depths of the West Hall car park, tucked away in an unobtrusive prefab, software producers were being shown a major development of the Amiga.

Basically, rumour has it to be an A500 with a difference - out goes the keyboard (as an optional extra), in comes a CD-Rom drive. This drive allows you to read CD discs, complete with a capacity of 550-600 MBytes of data. That's equivalent to around 700 normal Amiga floppy discs. And you could almost get a Sierra game on that!

Expected to be shipped in Europe first, later this year, this is an exciting development of the Amiga. More details as they trickle out.

COMPUTER SOFTWARE

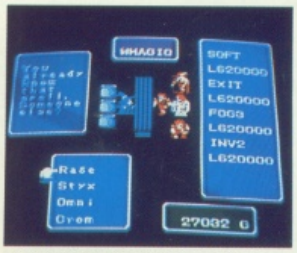
OK, so the show was dominated by consoles, more consoles and yet more consoles, but there were still the odd few people out there on the show floor doing it how we used to - on floppy.

The long, long, long awaited *Harpoon* from 360 Pacific finally made it to market - and looks the finest strategic level simulation to date. Out now on IBM - to be on ST and Amiga in the fullness of time.

Best PC Graphics of the show had to go to Lucasfilm, and the job they've done on *Loom*, but in all, it wasn't a great show for entertainment software on floppy. As it goes back to lick its wounds after the pounding by ROM, expect it to come out fighting in Chicago in June!

Shooting live action for Cinemaware's **It Came From the Desert** *on CD.*

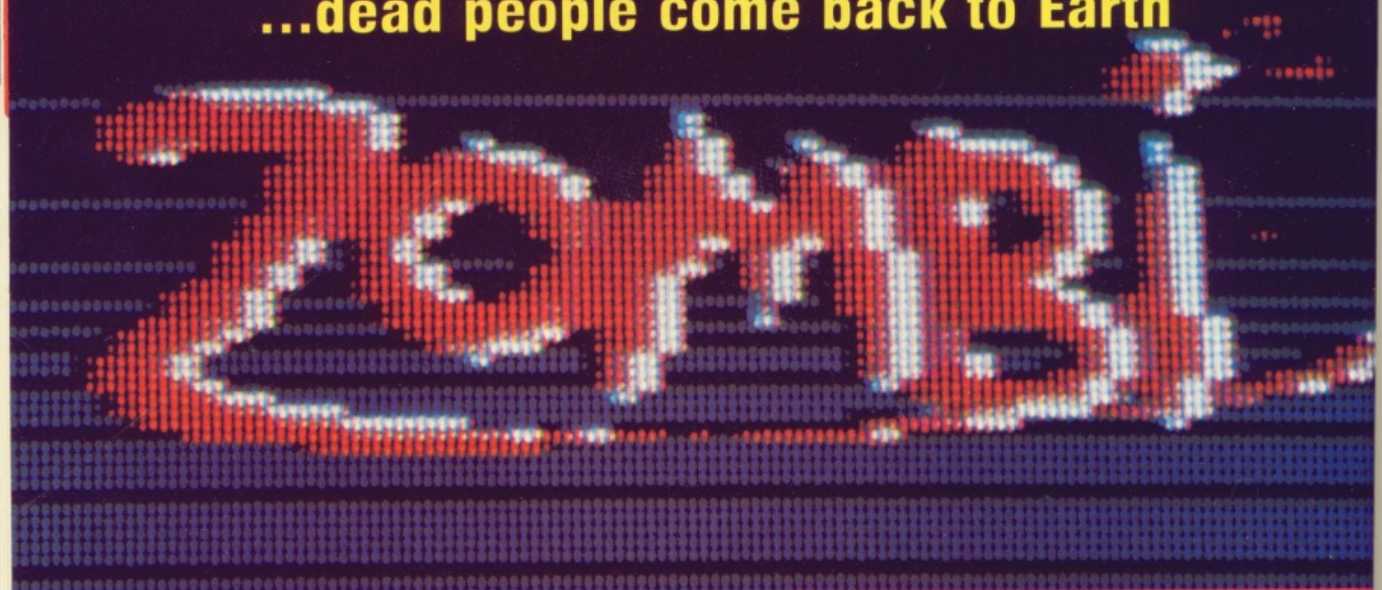
30% of Gameboy users are over 18 years old, half of that over 25. There's an almost 60/40 split between males and female here too. An avalanche of software is being developed to cash in on that base - from bog standard* Invaders, *to complex NFL Football games.



Final Fantasy *on the NES (with battery backed RAM so you can save games) is a step in the right direction for ROM software designs, but you lose out on the graphics com-*

Remember last month's Blitter End piece, in which Steve Franklin of Commodore said the company had a secret weapon against the Japanese? The answer could lie in a rumour emanating from the car park about the existence of cartridge software for the 64. Is this Commodore's answer to Nintendo? Plug-in software for the 64? Now that'll be interesting if it's true.

When there is no room left in Hell...
...dead people come back to Earth



The nightmare has just begun

For mysterious reasons, dead people come back to life to feed themselves on the flesh of human beings. The Earth is inhabited by millions of Zombies, who are spreading terror, and by gangs of hooligans, who are ready to do anything to survive. Yet four people didn't lose hope and decided to run away to new horizons.

"What a great game ! UBI SOFT have taken a video nasty and an arcade/aventure, and combined them, coming up with a real winner in the process. Moving your four characters around the building, trying to find a way out, all the time fighting off attacks from zombies, is very atmospheric. There are some good puzzles to work out, and a hell of a lot has gone into the game. By all means, get hold of this game."

"Everything is nice and detailed, with the background graphics looking particulary effective."

AMIGA ACTION

Amiga screenshots

Available now for your ST, AMIGA and PC

UBI SOFT

Entertainment Software

Digital Bat Fantasy

Batman Digital Justice © 1989 DC Comics Inc. All Rights Reserved

Welcome to the entertainment medium of the 21st Century! Rik Haynes flies to New York for an exclusive ACE interview with the creator of the world's first interactive comic

Pepe Moreno is a 35 year-old Spanish born artist working and living in a crack-dealing neighbourhood of Manhattan. Not content with creating the entirely computer-generated *Batman Digital Justice* comic book, he is now using the book's digital data to produce the first interactive hypercomic.

HYPERACTIVIST

Moreno is totally absorbed in the possibilities of high technology and its application in the mediums of art and entertainment. "I'm more a futurist than an artist. I sell the future to corporations," explains Moreno. "I've been after hypermedia for years, the idea is to finance the *Batman Digital Justice* hypercomic as a concept project."

"We're trying to bridge the comic book market and the computer game market – we hope to make this an industry of its own. I have no problems with competition but nobody else is doing this. Everybody knows it's going to happen – but the market isn't there yet."

The *Batman Digital Justice* computer-generated comic book and hypercomic project was started about 18 months ago when Moreno first entered negotiations with the holder to the Batman rights, DC Comics, part of the giant Warner Bros. corporation. But why Batman? "Batman is a very strong cultural icon with international appeal. I chose him because I wanted to reach the mass market – Batman's hype will establish the technology a lot sooner."

"My plan is an overall tactical strategy. The use of a computer was a conscious decision because it's all digital data, and digital data is very easy to manipulate. I'm an integrator – combining separate elements into one workable system."

If it's printed in red then you can find out more about it in our Hyperguide on page 57. Just look for a box with the same title as the highlighted word.

COMICS ON SCREEN

The traditional comic book takes about six months to develop, *Batman Digital Justice* took 18. "The way I portray the story is in a cinema-style which has more atmosphere than a normal comic book. More like movies on paper."

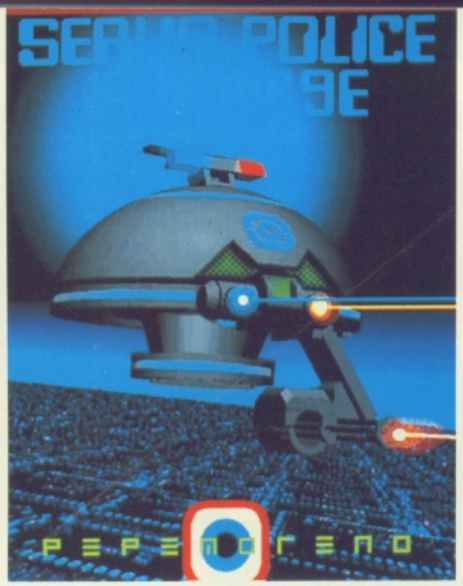
The *Batman Digital Justice* hypercomic is pitched between passive and active user-interaction. "Too many computer games rely solely on competing. Interesting characters and motivating storylines are just as important factors as playability. With the hypercomic you'll have a more dimensional experience than you would with either a comic book or movie. There is too limited a space In a comic or movie to build or develop a character. Our development of interactivity and the user's access to all manner of information through a *Hypercard* environment will create a far more complex and entertaining medium."

"Cyan's *Cosmic Osmo* hypergame on the Macintosh was fully interactive but didn't have much atmosphere to it," states Moreno.

The first versions of the *Batman Digital Justice* hypercomic are being developed for the Macintosh and PC micros on CD-ROM. "The Next machine is the ideal machine for my work because it already has the

"Gotham Megatropolis. Sometime into the next century. Welcome to future land! Take a ride on the progress express. Around you is an apparently perfect world – but this is a 'make believe' world with vengeance, a world with no soul and a heart that beats in binary code. One or Zero – God or the Void. A complex and wired world dominated by a tyrant code. A computer virus from long ago that has become the world's first Digital Dictator.

The only hope is a myth from the past, from a time of legend and superstition, long before the virus plagues. A new kind of hero, a program of 'clean' code and pure memory, a program written by a legendary crime fighter... A digital hero, one that can restore digital truth – Digital Justice"



internal player," but Moreno will cater for any machine capable of handling a CD device – if the demand and potential market is big enough. He's also interested in the new CD version of the Commodore Amiga launched at the Winter CES Show (see page 18 for a full show report).

The Macintosh hypercomic will be complete within six months, Moreno is currently developing a *Hypercard* application to drive it and is also working on its audio and animation aspects. "I don't know much of the core technical stuff, I act as a kind of director. We're going to put in various soundtracks and sound-effects, and animate various parts of the images. You'll be able to freeze it any time and go backwards or forwards through it at will. There will be different areas like the Media Tower and Mayors Residence to give you a proper feeling of where you are in this fantasy universe. Instead of speech bubbles, the characters will speak with dubbed actors voices and the hypercomic will be language independent – it will contain three of four language tracks for English, Japanese, German, French or Spanish."

There are also plans for a CDI version of the *Batman Digital Justice* hypercomic, "as soon as Warner Bros. has finalised negotiations, I'll be getting some of those CDI units over here. I'm also in personal contact with Sony in Japan."

BRING BACK LOONY TUNES

Moreno is influenced by the classic American animated cartoons of the 50s, "I miss the the old Warner Bros. *Loony Tunes* cartoons. The Japanese have never understood what rubberising a character is, because it's not in their culture. The Japanese factory line, however efficient or reliable, can not reproduce this. The cowboy, maverick individual is not part of the Japanese culture. The opening sequence in *Roger Rabbit* is back to the all-American cartoon – that's what it's all about. Hopefully computers will bring back house-made cartoons."

SEX, LIES AND CDI

"Hypermedia is where it's at," enthuses Moreno. "Imagine an electronic hypermedia version of ACE magazine. You load it up and see the cover. This cover may have a little bit of animation to bring the point of the cover or articles to the fore. You go to the content pages. You click on the Japanese icon - the text is all translated into Japanese. You click on any article you like. Maybe it reads the article to you or scrolls the text in a window. You can read the article

"Progress doesn't give explanations to anyone."

"I hope there's somebody out there trying to beat my ass – that would be nice."

Moreno's Voyage illustration won him first prize in the '89 Macintosh Masters II contest

THE BOHEMIAN TECHNOCRAT

Pepe Moreno was born in Valencia Spain, and spent most of his childhood hooked on weird and spooky art. After brief spells as a soldier in the Spanish Army stationed in North Africa and a European-travelling DJ, Moreno set out for the USA in 1977. Over the next five years, Moreno got actively involved in the punk scene – playing bass in a punkabilly band – while contributing numerous illustrations to *Creepy*, *Eerie* and *Vampirella* horror magazines. He also published the counterculture graphics magazine *NART* (No Art), and had several short stories published in *Heavy Metal* and *Epic Illustrated*. In 1982 he moved from San Francisco to New York – driving coast to coast in a '67 red Cadillac – and produced three widely-acclaimed graphic novels: *Rebel*, *Joe's Air Force* and *Gene Kong*. He then switched to animation, designing hi-tec sets and mutated characters for three US syndicated cartoon series: *Thundercats*, *Tiger Sharks* and *Silver Hawks*. In addition, Moreno art directed TV commercials for Commodore and *Transformers*. The hi-res colour graphics of the Amiga and the Macintosh fuelled a creative renaissance for Moreno, culminating in the *Batman Digital Justice* project.

while simultaneously accessing other articles for cross-reference. You click on a photograph and a live video comes on or a playable demo of a game starts. There is so much video footage these days which doesn't get used. You could be connected up to a worldwide network for real-time updates or communication with other users. The potential is limited only by the imagination."

"This stuff is happening already, they used *Hypercard* during the last elections. There were so many candidates and mass of related information that an TV anchorperson could easily make a mistake during a live broadcast. So they put all the candidates data into a *Hypercard* stack. You could click on the name and it would bring up what that candidate said in their last speech or TV appearance."

"People who have the money already use hypermedia."

DIGITAL ART

Moreno proudly proclaims, "digital is the art medium of the future".

"The essence of art is to communicate and motivate society through whichever medium. What you want as an artist and where your imagination takes you is one thing, it's quite another matter what the market will bear – it's a very important and difficult balance. Digital is the best medium to maintain the quality of the original concept throughout all the creative and manufacturing processes of producing a consumer product."

"You're on your own not trusting anybody – that's how breakthrough's come about."

"I act as an art director and the computer does all the labour. I've become a better artist, with greater effect. It takes twice as long to produce art on a computer, but the results are like it took twenty times as much. If you're a methodical person you can cut the time in half."

"The good news about digital art is that it's sneaking behind the censors. Comics have a heavy censorship burden to bear, they're perceived by the Americans as pure kid entertainment. If they include some adult content people think you're trying to pervert kids. We're trying to break the norm – giving it a broader appeal. We can can do this today because computer generated entertainment is difficult to control. But what about tomorrow?"

FUTURE SHOCKS

"In the future we will develop the computer-generated comic book and hypercomic at the same time – when we reach this stage I will probably be off doing other things."

"Future artists will preoccupy themselves only with the concept – the raw essence of this concept will then stay alive throughout the process of making a product. Writers will create the concept as raw data and run that raw essence through Artificial Intelligence (AI) software to produce the story. This AI software will be able take in any script requirements. You'll be able to create your own stories without having to rely on Hollywood or TV script writers. The fictional universe will constructed by building a digital set: you'll build a whole universe in 3D, including characters, vechicles and buildings. It's a very time consuming effort but once you have all those 3D models constructed from a logical space sense, you can build the story by just doing camera pans through different places while retaining lifelike relational perspectives. I did build some of the environments for *Batman Digital Justice* that way, but I would have liked to build the whole of Gotham City. It's a great effort in the beginning, but you can turn that raw data just as easily into an animation as a static image. The idea is to build a digital set, then just let the electronic camera go anywhere in that fictional universe."

"Are you going to ignore the art medium of the next century?"

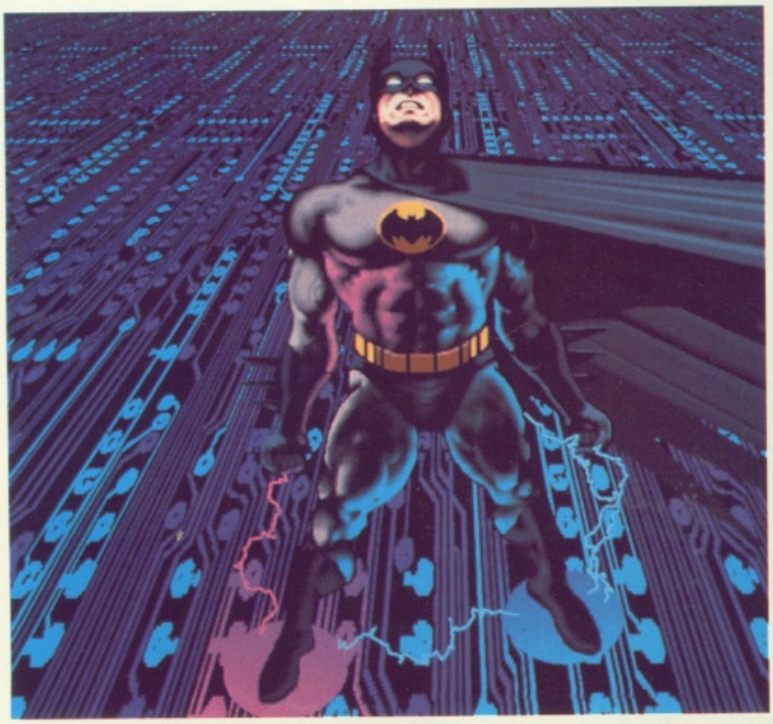
CANVAS OF THE 21ST C

"I use a great deal of art programs, with about four specially preferred packages. My approach is to use a suite of commercially-available off-the-shelf software tools. The bottom line reality when you use the Macintosh is that no one single program can do it all."

"I hope to encourage software developers to create the tools to keep up with me."

The *Batman Digital Justice* comic book has 114 pages with 88 pages of storyline produced from 200Mb of clean data. Moreno started with the traditional thumbnail sketches to illustrate the story. He then used 3D modelling programs – Adobe's *Super 3D* and *Pro3D* – to create the buildings, machinery and backgrounds. Human characters were drawn on paper, scanned into the Macintosh, and touched up using Letraset's *Image Studio*. EA's *Studio 8* was used to combine and colour the images. The pages were laid out on *Quark XPress* – ACE also uses *XPress* to lay-out all the editorial pages. Grupo Anaya's colour-separation software was used to produce the film.

"I originated the data on its own, basically each panel is a painting. The foregrounds and backgrounds are created separately, then assembled into panels and pages at a later stage. As I was finally going to print, I optimised every single picture to have the maximum amount of colours. I have 256 colours per page – I had to economise on data because the bigger a file is, the more hassles you have to go through. A typical page takes 400K-500K."



"An 88 page story used to require 88 pages of artwork. With resolution independence, which came in at the later end of the *Batman Digital Justice* project, we could make the book go from 80 pages to 88 pages and have all these additional things on top of cinematic ploys like close-ups of eyes and establishing shots. Because you have the same data, you can travel around camera-wise. Nowadays if I wanted to do an 88 page book, I would only do 40-60 of raw data which could then be manipulated in a variety of ways. The art is rendered with detail. One panel could turn into five by focussing on individual details contained in the original image by establishing shots, close-ups, etc."

Moreno uses $60000 worth of hardware to create his works of digital art, including two 8Mb 24-bit palette Apple Macintosh II computers with shared data file link via Apple Talk, Mass Storage 45Mb removable hard-drive, b/w and colour scanners, laserprinters and a RasterOps colour monitor. The *Batman Digital Justice* data, including backups, fills 10 45Mb removable hard-disks.

Moreno's constant upgrading and investment in new software and hardware does ultimately pay-off though, "if I were to do a sequel to *Batman Digital Justice* it would take me half the time..."

"I don't care how long it takes or how much I burn myself to death, I'm going to do this product."

DO ARTISTS DREAM OF ELECTRIC SHEEP?

"My friends and I are going to turn my flat into an electronic publishing multi-media studio. I want to integrate our visual and audio talents. This creative sweat-bag is what really makes things happen."

"I believe the whole political change in the Eastern Block has more to do with personal computers in essence than anything else. They have the perception that if they don't catch up now they never will."

"People shouldn't be threatened by new technology, it's there to enhance their lives."

"Hi-definition TVs will have built-in computer chips 20-50 times more powerful than the Macintosh's 68000. Your remote controller will become more than a channel selector, it will become a 'mouse'. You'll be able to interact with what's happening on-screen."

"I'd like to see all the 3D models I create sent through the wires to a computer mill which would cut a sculpture or manufacture a toy."

"Advances in optical medium and LCD technologies will make portable interactive electronic comic books feasible in two to three years time."

"With 12 million hours of entertainment to fill – art and entertainment will become the key industries of the 90s and beyond."

"This stuff has got to be around in the year 2000 – I can't imagine it otherwise. Time is my only problem, I don't have enough of it."

NEW ! FROM ENCORE...

BEYOND THE ICE PALACE
Spec. Cass. 2.99
C64 Cass. 2.99
Ams. Cass. 2.99

Release Date 7.3.90
© 1988 Elite Systems Ltd.

IKARI WARRIORS
Spec. Cass. 2.99
C64 Cass. 2.99
Ams. Cass. 2.99
C16 Cass. 2.99

Release Date 21.2.90
© 1986 Elite Systems Ltd.
© SNK Corporation 1986

WONDERBOY
Spec. Cass. 2.99
Ams. Cass. 2.99
C64 Cass. 2.99

Release Date 26.3.90
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WS9 8 PW England Telex: 336130 ELITE G Consumer hot line: (0922) 743408

SPECIAL

LOST PATROL

As OCEAN goes on a 'search and destroy' mission in Vietnam, Rik Haynes volunteers for a special recon preview

June 1965: a US helicopter crashes in the remote central highlands of Vietnam, leaving only seven survivors. They have little food or ammunition, no radio, and need to find a way to cross 58 miles of a wilderness that is alive with enemy soldiers and booby traps. That was the good news, the bad news starts here...

▲ *Vietnam '65: a picturesque country, but a very dangerous place for an inexperienced American soldier fresh from boot camp*

► *Choose your way, decide on starvation food rations or get dug-in [inset] a sequence of digitised frames depicting Hollywood's vision of the Vietnam conflict*

◄ *Your squad's morale and strength's looking OK, but as leader of the patrol you'll soon have to make some tough deployment decisions*

► *Lock 'n' load, let's head-out. The US 5.56mm calibre M16 assault rifle weighs 3.73kg and has a max. range of 400m*

▲ *If only the elite troops of the US Navy SEALS (Sea, Air, Land) were here to help you, instead there's just a couple of Vietnamese civilians*

WHERE'S THE ACE VERDICT?

You may see reviews of *Lost Patrol* elsewhere. Although ACE played the same version of the game shown to all the press, we decided *Lost Patrol* was in too incomplete a stage to actually review it. We only review finished games – the versions of the games you actually buy.

The pre-production copy of *Lost Patrol* we played was nearly finished, but the crucial playability ingredients were still being tweaked in all the arcade sequences. In addition, the sound effects were in a separate program waiting to be included into the game – some of these FX may be missing in the final version, as may some of the game's graphics screens. Combined, these factors could make or break a game. We have not assigned ratings or a predicted interest curve to this version of *Lost Patrol* (a future issue of ACE will have this information after we've played the completely finished game). In the meantime, here's my opinion on what I've played so far:

Despite being a brilliant concept and valiant effort by Ocean and Shadow Developments, *Lost Patrol* falls uneasily between two completely different game genres: strategy and arcade. This may prove to be the game's ultimate downfall.

"In World War Two the average age of the combat soldier was 26. In Vietnam he was 19."
19 single by Paul Hardcastle, 1985

A scene of tranquillity, but keep an eye out for punji stick booby traps – concealed underground bamboo spikes or nails which trap the victim's foot, piercing the boot and leg

More often than not, opposing sides are so close that fire support can't be provided by aircraft or artillery

RELEASE BOX		
AMIGA	£24.99dk	IMMINENT
ST	£19.99dk	IMMINENT
NO OTHER VERSIONS PLANNED		

One of Lost Patrol's five arcade sequences: IK+ it isn't – remember you're an ordinary grunt, not Bruce Lee!

Most VC are equipped with the Soviet-sourced AK-47 assault rifle, Chinese Type 56-1 or French 9mm MAT sub-machine gun

Lost Patrol was written for Ocean by Shadow Developments – Ian Harling designed the game and graphics, Simon Cooke was the main programmer, and two other coders provided miscellaneous programming routines.

A typical Vietnamese river or stream can contain hidden booby traps or blood-sucking leeches

The Viet Cong

The Viet Cong or Vietnamese communists developed from the Viet Minh who battled with the French to win independence during the first Indochina war. They had no official uniform but many wore the black 'pyjama' suits which were popular among the peasants of Indochina. The 'Ho Chi Minh' sandals they wore were made from pieces of lorry tyres and over the shoulder they wore a cloth tube which contained up to a month's supply of rice.

NAM'S HISTORY OF HORROR

- After World War Two, France attempts to reestablish rule over its prewar Indochinese colonies of Cambodia, Laos and Vietnam.
- In 1950, the US government starts to give economic and military aid to France to help its Vietnam campaign.
- Ho Chi Minh, the leader of the communist forces in Vietnam, is officially recognised by the Soviet Union and People's Republic of China.
- By 1954 the American's bear 78% of the cost of the French war effort in Vietnam.
- Numerous French defeats in Vietnam – culminating in the humiliating loss of its stronghold at Dien Bien Phu – forces France to agree to a cease-fire in May 1954.
- Vietnam is split into two by a Demilitarised Zone (DMZ) along the 17th Parallel.
- The communists are based in Hanoi in North Vietnam, the American-backed Vietnamese government remain in the Saigon capital city in the South.
- The Vietnam War starts in 1957 as an insurgency offensive in the Republic of Vietnam (South Vietnam) with insurgents supported by the Democratic Republic of Vietnam (North Vietnam).
- The North Vietnamese insurgents are known as Viet Cong (VC).
- In 1961, the US President John F. Kennedy decides to increase the numbers of American "advisers" in Vietnam, but does not commit combat troops.
- During 1962 US military strength in South Vietnam grows to more than 11000.
- In 1964 the VC kill and abduct over 11200 people – their strength has now grown to 35000 active soldiers and over 100000 political cadres.
- South Vietnam's VC insurgents are supplied through a series of routes in Laos, collectively known as the Ho Chi Minh Trail.
- In August 1964, American destroyers are attacked by North Vietnamese patrol-boats in the Gulf of Tonkin.
- The US begins a "strategic" bombing campaign in North Vietnam known as operation Rolling Thunder between 2nd March 1965 and 31st October 1968. During 1966 the American's fly 148000 bombing missions against the North.
- On 25th August 1965, the 1st Air Cavalry Division (Airmobile) arrives in South Vietnam with a complement of 15787 men and 428 helicopters.
- The North Vietnamese begin The Tet Offensive during the Lunar New Year Tet festivities in January 1968. Over 70000 VC and North Vietnamese Army (NVA) soldiers attack 105 of South Vietnam's 292 provincial capitals, district capitals and self-governing cities. 750000 civilians are made homeless and between 35000 and 50000 VC are killed.
- Unproductive talks between the North and South Vietnamese governments commence at Paris in May 1968.
- In 1968, the US combat soldier has a 1 in 55 chance of getting killed during his Tour of Duty.
- American deployment peaks in January 1969 with 542000 US forces serving in South Vietnam.
- In 1970 the number of reported drug cases in the US forces serving in Vietnam rises to 11058. Drugs used include marijuana, opium, morphine and heroin.
- Almost all the American ground combat forces have departed from South Vietnam by early 1972.
- On April 30th 1975, South Vietnam's government surrenders.

Is this a lovable old granny or a committed communist out to kill you? Your answer could mean life or death for you and your men

HUEY

The Bell UH-1B Huey light transport helicopter had a range of 341km, max. speed of 222km/h, and could carry seven soldiers plus a crew of two. The Huey was also used as a gunship armed with various combinations of 7.62mm and 12.7mm machine guns, 20mm cannon, 2.75" rockets, 40mm grenade launchers, and French SS11 missiles.

If the tide turns against them during a battle, the VC can hide their weapons and simply merge with Vietnamese villagers

The rules of the Geneva Convention are so blurred and mistreated as to be unrecognisable during the Vietnam conflict

AGONY UNCLE

Are you a budding games designer, graphic artist or programmer? Have you encountered difficulties in showing your skills and talents to software companies? Do you want some help? If the answer to all three questions is yes, then Ian Harling may just be the person you're looking for. If you want advice or assistance in getting your work published or even recognised, Harling would be pleased to hear from you. He'll tell you some tricks of the trade and may even be in a position to offer practical support. Write to: **Ian Harling, 4 Aberdeen Road, Redland, Bristol BS6 6HJ**.

So much for winning the 'Hearts and Minds' of the Vietnamese people – just blow a few away to get what you want

Easily the best part of the game: the sniper arcade sequence with innovative magnifying telescopic sight

The VC are very resourceful and waste nothing. After a firefight they will take away any empty shells, rearm them, and use 'em again at a later date

TOUR OF DUTY

The Night belongs to Charlie
American forces ceased all operations at night, returning to their heavily defended bases or simply getting dug-in where they stood. Meanwhile, Charlie – the Yanks slang-term for the VC – moved supplies and men under the cover of darkness and the surrounding jungle.

Napalm
A horrendous US incendiary device made of a jelly-like petrol substance which could burn through anything, causing obscene injuries to both VC and Vietnamese civilians alike.

Vietnamisation
The US military program to build up South Vietnam's armed forces before the Americans pulled out

Post Traumatic Stress Disorder
With American society geared solely towards winning and quick results, the humiliating drawn-out US defeat in Vietnam created many problems for the returning American Nam combat vet. When they got back to the good old USA, these vet's experienced severe difficulties in readjusting to civilian life, ending in increased alcohol abuse, drug-taking, violent crime, marriage breakup's and even suicide.

Agent Orange
Perhaps the only American legacy left in Vietnam today – deformed children, crops and livestock – thanks to the US policy of spraying large areas of Vietnam with the Agent Orange defoliant during the Vietnam War. The American's coined the phrase "Geek Linctus" for this immoral act of force.

The US Marine

The primary role of the US marines was as a rapid deployment force which could be sent into action at very short notice. They were armed with the M16 automatic rifle and a variety of infantry-support weapons including machine guns, mortars and grenades, which were found to be very effective in the house-to-house fighting which developed during the battle for Hue.

Your men are demoralised and disgusted with your leadership. All you'll get now is a 'fragging' (your own troops will assassinate you with a fragmentation grenade) and a corpse-class flight back to small-town America in a body-bag

ACE AND OCEAN GIVE YOU THE UNMISSABLE OPPORTUNITY TO WIN SOME 'NAM MOVIES AND A VCR TO PLAY 'EM ON

COMPETITION

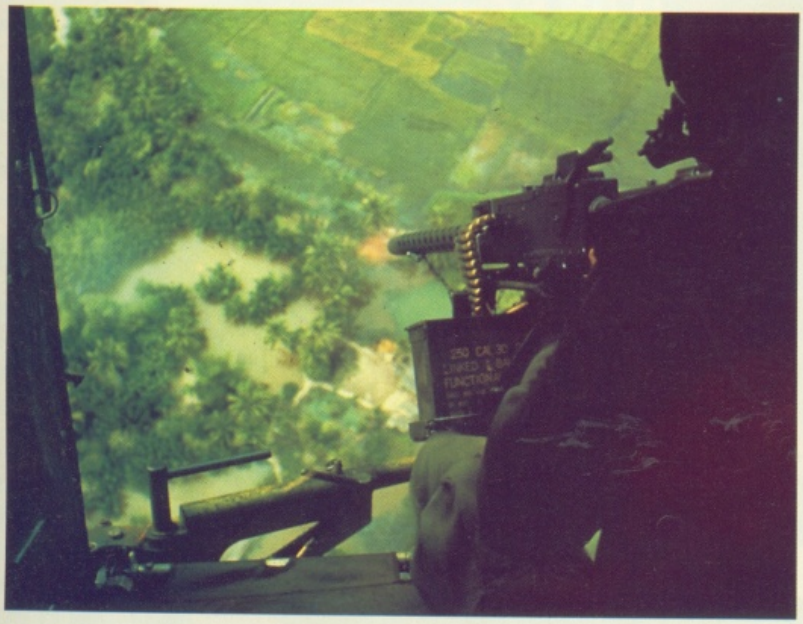
GOOD MORNING VIETNAM!

Here's a once in a lifetime chance to snatch up some recent 'Nam videos, together with your very own Video Cassette Recorder

Of late there has been something of a revived interest in Vietnam. The United States seems to be finally coming to terms with the full horror of the war it couldn't win. A whole spate of movies from Coppala's *Apocalypse Now* to Kubrick's *Full Metal Jacket*, and Stone's *Platoon* have attempted to exorcise the ghosts of Vietnam that still plague the conscience of the American People.

There have also been a number of computer games based around the events in Vietnam. Ocean were responsible for bringing us the superb *Platoon*, based on the film of the same name, and have now returned to the Vietnam theme with the impressive *Lost Patrol*. (See our detailed preview of the game on pages 28 to 30.)

Ever since the company's inception, Ocean has gone from strength to strength. As a leader in the 8-bit market Ocean were quick to take up the challenge of producing equally impressive 16-bit software (although they have never forgotten their commitment to older machines). Recent well-recieved releases like *Batman* and *The Untouchables* , as well as adventurous titles like *Lost Patrol* are an indication of the continuing growth of one of Europe's most repected software houses.



ALL YOU HAVE TO DO IS...

...answer the simple questions below. They are all intended to test your knowledge of 'Nam movies, but to give you a fair chance we've given you a choice of three answers to each one.

Mark your answers on the back of a postcard, together with your name, address, and telephone number. Send your completed postcard to :

ACE VIETNAM COMP,
PRIORY COURT,
30-32 FARRINGDON LANE,
LONDON. EC1R 3AU.

1. Who was the star of the film Apocalypse Now?
   a) Charlie Sheen
   b) Martin Sheen
   c) Emilio Estevez

2. Who starred in the film Platoon?
   a) Charlie Sheen
   b) Martin Sheen
   c) Marlon Brando

3. Who said 'Good Morning Vietnam'?
   a) Chevvy Chase
   b) Steve Martin
   c) Robin Williams

THE PRIZES

The first name to be drawn out of the hat will win the following goodies:

•A high quality VHS Video Cassette Recorder

•And these great films on VHS format video

- *Platoon*
- *Full Metal Jacket*
- *Apocalypse Now*
- *Hamburger Hill*
- *Deer Hunter*
- *Good Morning Vietnam*
- *Green Berets*
- *Uncommon Valour*

Rules

1. The closing date for entries is 1st March 1990.
2. Employees of EMAP or Ocean are not eligible for entry.
3. No cash alternative can be offered for the prizes.
4. The editors decision is final and no correspondance will be entered into.

LOCK & LOAD

MAGNUM 4

AFTERBURNER – You've played the arcade smash – now experience the white-knuckled realism of a supersonic dogfight at home!
Using your heat-seeking missiles and laser anti-aircraft fire, can you be top gun against supersonic swarm?
AFTERBURNER TM SEGA © are trademarks of SEGA ENTERPRISES LTD.

DOUBLE DRAGON – Join in deadly combat with the savage street gang of the infamous Shadow Boss. Use whatever weapons come to hand as you pursue the gang through the slums, factories, and wooded outskirts of the city to reach the Black Warrior hideout, for the final confrontation with the Shadow Boss himself!
© 1988 Mastertronic International, Inc.

4 HIGH CALIBRE GAMES IN ONE PACK FOR YOUR ATARI ST/ AMIGA

OPERATION WOLF – "Not only has all the action and game play been captured, but so has the excitement, making it one of the most satisfying and compulsive shoot-em-ups to have appeared in a long time" ACE
Licensed from © Taito Corp. 1988

BATMAN – The characters and backgrounds are striking – each are superlative – features a soundtrack in glorious remixed stereo' The One
TM & © DC Comics Inc 1988 All Rights Reserved

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SCREEN TEST

ALL NEW PIC CURVE POWER

The PIC – Predicted Interest Curve – is the most sophisticated reviewing tool around. And now it's entered the 90's...

We on ACE know you don't just **play** a game – you **experience** it. The newly upgraded Predicteded Interest Curve is the **only** review system that takes this all-important factor into account.

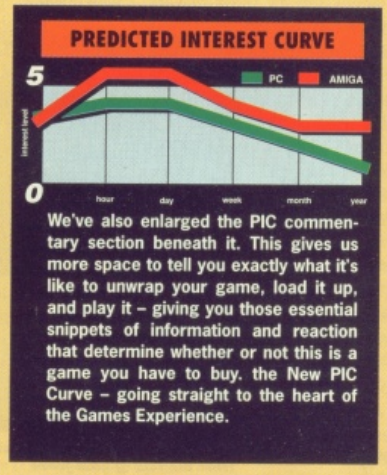
The PIC Curve has been redesigned to immediately **give you** the info **you need** at just a glance. To back up our instant appraisal there is an expanded, in-depth comment at each stage of the game's playlife. The curve is divided into six sections, indicating the player's adrenalin level after one minute, one hour, one day, one week, one month, and one year. But this tells you an awful lot than just what your interest level will be at any given time (although that's obviously important in itself)...

For example, a high one minute rating means that the game must look fantastic and get you all excited from the word go. That means it's probably a good game to show off to the neighbours – after all, they probably aren't going to pay attention for much more than a minute, after which they'll go back to drinking coffee and making rude remarks about 'those awful hostile games the boys play these days'.

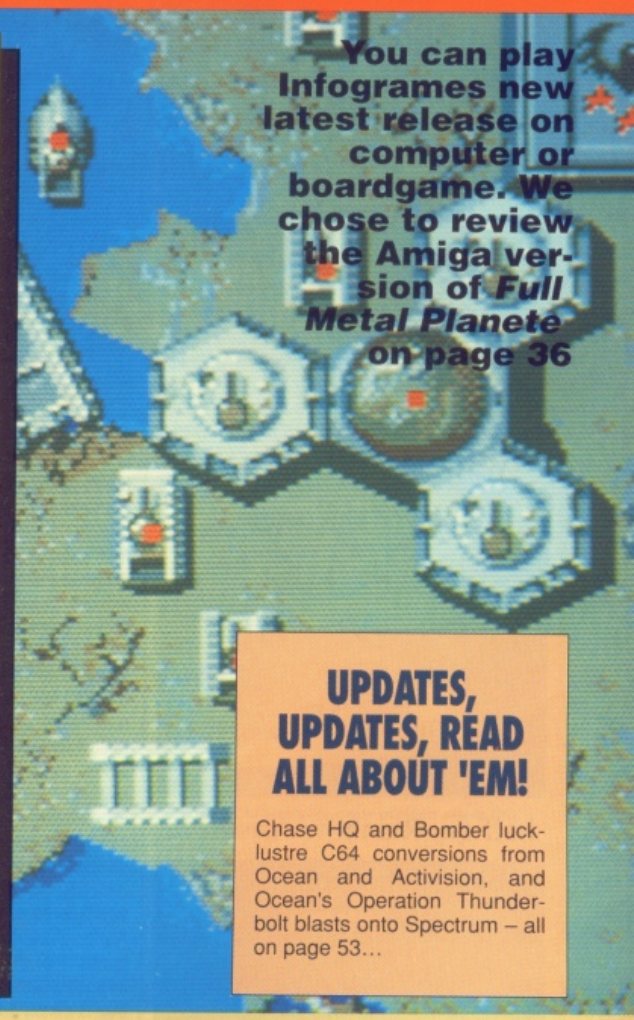
The minute, hour, and day ratings can tell you a lot about a game too. If there's a dip here, followed by a rise, you've got a game that may take a bit of getting into – not recommended if you like to get down to something quick and easy. Alternatively, the graphics may put you off for a while until the gameplay starts to grip. Check out the PIC comment for more details.

Finally, you've got the month and year ratings. The better a game holds up here the more deserving it is of your hard earned cash.

PIC curve construction takes a lot of playing on the part of ACE reviewers. PIC curve analysis is an art in itself. The reward is knowing just what you're getting when you make the decision to splash out on *Mutant Macdonald Gettysburgers....or Conqueror* – this month's 900+ ACE rated example of advanced 16-bit software technology.



We've also enlarged the PIC commentary section beneath it. This gives us more space to tell you exactly what it's like to unwrap your game, load it up, and play it – giving you those essential snippets of information and reaction that determine whether or not this is a game you have to buy. the New PIC Curve – going straight to the heart of the Games Experience.



You can play Infogrames new latest release on computer or boardgame. We chose to review the Amiga version of *Full Metal Planete* on page 36

UPDATES, UPDATES, READ ALL ABOUT 'EM!

Chase HQ and Bomber lucklustre C64 conversions from Ocean and Activision, and Ocean's Operation Thunderbolt blasts onto Spectrum – all on page 53...

THE ACE REVIEWING SYSTEM

PIC CURVES
This unique feature to the ACE reviewing system charts the interest level that a game stimulates over a period of time. The curve is accompanied by a comment to explain why it's the shape it is. Find out more in the Pic Curve Power panel on this page...

Each review also carries special 'Version Boxes' that give you details of the game's implementation on a specific machine. These boxes include ratings for...

GRAPHICS
All aspects of the game's graphics with the limitations of each machine taken into account. A good-looking Spectrum game will therefore score higher than an average-looking Amiga one.

AUDIO
The music and sound effects are rated here. A high rating is possible on even limited machines like the Spectrum and PC if the computer's shortcomings are cleverly sidestepped.

IQ FACTOR
Yes, sometimes you have to use your brain. This rating evaluates the risk of mental effort – which some people actually enjoy...Note that ACE readers are generally reckoned to be more intelligent than other human beings, so the ratings may be lower than you expect...

FUN FACTOR
Basically a measure of mindless addictiveness. Games like *Arkanoid* and *Flying Shark* require virtually zero brain power but are still remarkably addictive. Most coin-ops score well here because they are designed for instant satisfaction. Games don't have to be *either* fun *or* intelligent – they can be both.

ACE RATING
This is not just plucked out of the air but is calculated from the area under the PIC Curve. To get a really high rating a game will not only have to be very addictive but stand the test of time as well. Just because a game does not get over 900 does not mean we are not recommending it – the following is a general guide to what the ratings mean.

900+ A classic game, recommended without reservation.

800-899 A superb game, but perhaps lacking the long-term depth to last into the month and year categories.

700-799 Still highly recommended, but probably has a couple of aspects to the gameplay that take the edge off it.

600-699 The 'fair' zone, where it tends to be very good 'if you like that sort of thing'.

500-599 This still has good things going for it, but the game clearly has some noticeable problems.

400-499 Problems with gameplay and programming make this an inferior game.

300-399 Not only is the gameplay bad but the design was probably flawed in the first place.

200-299 Things are getting really serious now...

100-199 ZX81 games running on an Amiga.

Under 100 Nothing has ever achieved this appalling level of rating. If anything ever does, it wouldn't even be worth having it for free.

VERSION BOXES
This covers version-specific information on graphics, audio, loading problems etc. If there's no box for your machine but a version is planned, it'll be covered as an update in a later issue.

THE TEAM
Laurence Scotford is ACE's ever busy Reviews Editor – Laurence has been playing games since he was a nipper, but some of them we probably ought not to mention. There was hot competition for the ACE Reviews Editor position from gamesters all over the country, but Laurence pipped them all at the post by showing that he could not only push a game to its limit, but he could push a pen too and tell you all about it.
Steve Cooke, one of the original editors of this award-winning magazine, is known to thousands through his many other previous identities, including Zzaps!'s White Wizard, The Pilgrim and Old Baldy. When he's not borrowing money and 'popping off to the States' Steve is often found playing Sierra's Leisure Suit Larry and other 'narrative computer games.
Rik Haynes was Reviews Editor on Britain's biggest selling computer weekly and has been hooked on electronic entertainment since spotting a Space Invaders machine in the corner of a Southend-on-Sea pub back in '78. Rik's reviews are renowned for being hard-hitting and often outspoken...
Eugene Lacey is one of Britain's most experienced games journalists.

We don't review anything until we are 100% certain that we've got it right. We've checked them out thoroughly – now you can too.

CONQUEROR

Way back in Issue 9 we reviewed the original Archimedes version of *Conqueror* from Superior and were suitably impressed - the game achieved a rating of 931. Now, a year and a half on, Rainbow Arts have delivered the Amiga and ST versions. We put our tin hats on and tell you how well the game has travelled.

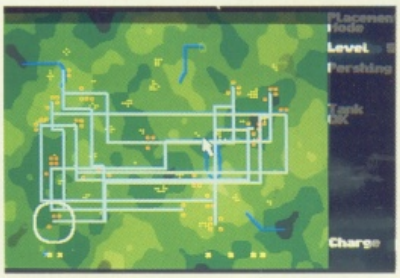
There have been three impressive tank simulations released of late - *M1 Tank Platoon* from Microprose, *Omega* from Origin, and now *Conqueror* from Rainbow Arts. While it is pleasing to note that all of them are extremely good pieces of software, it is also interesting to note how different they are.

Omega is not so hot on the graphics front, but the ability to actually program and design your own automated tanks is the sort of thing that will appeal to the technically minded. *M1 Tank Platoon* on the other hand is the sort of full blown simulator that Microprose is renowned for. It has the impressive graphics and attention to detail that are characteristic of all the simulations that this house has released to date.

Conqueror offers something completely different again. While it is a technically accurate simulation, it will prove to be a lot more accessible to most players than either of the other two simulations. This is due, in part, to David Braben's graphics system, first seen in *Zarch*, which is used to generate the game's landscape and 3D objects. This uses a contoured patchwork of cubes to construct a portion of visible landscape onto which are mapped traditional filled vector graphics to represent trees, buildings, and tanks. The resulting three-dimensional view gives a very realistic feel as tanks disappear behind hills or judder across streams.

There are three basic games available at ten possible levels of difficulty, all set in a Second World War scenario. These are Arcade, Attrition, and Strategy. The Arcade game allows you to get straight into play without too much thought. The objective is simply to hold out for as long as possible with a single tank against the computer-controlled opposition.

This game is useful for practising direct control of the tank, which can be tricky until you've had time to adjust. The default mode is control by keyboard. The initial key settings are actually very good (that is to say you can reach everything), and this is probably the best method of control if you only have a single joystick. There is optional mouse control of the gun turret in this mode, which allows a second player to control the firing, while the first player drives the tank.

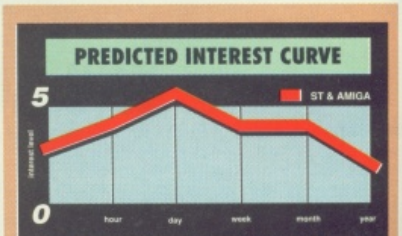


The map in the Strategy game clearly shows the circular area you must capture and hold

If you are playing on your own you can opt for either an automatic driver or gunner. This allows you to concentrate on one aspect while the other is taken care of by the computer. It is nice to see a thoughtful feature like this being implemented, but I quickly got frustrated at having to modify my actions to suit what the computer was doing.

One extremely good feature of *Conqueror* is the number of control options available. You can

Trundling past some attractive buildings while reports come in from the rest of your force



There probably won't be a high initial interest in this product, unless you are a hardened sim fan or tank fan or both. When you've got it up and running, however, you will soon be drawn in by the game's presentation and features. You will get most out of the game once you've had time to adjust to the controls and objectives. Your interest is likely to be kept high while you continue to make progress, waning only after you've been playing this for some time.

RELEASE BOX

ATARI ST	£19.99dk	LATE FEB
AMIGA	£24.99dk	LATE FEB
PC	£24.99dk	TBA

No other versions planned.

Patrolling a captured target area – the number in the top right-hand corner shows how many seconds you have left before you win the game

use almost any combination of mouse and joystick control that you care to think of. Probably the best option, but one requiring two joysticks, is to have a joystick in either port and to use one to control each of the tanks tracks. This works in a similar way to the old *Battlezone* arcade game (and indeed the controls in real tanks). In this mode the sideways movement of the sticks is used to control the turret, so you can do everything you need to do without having to take your hands off the sticks.

Once you have mastered basic tank manoeuvres it is time to go on and tackle the Attrition. In this game you have a basic selection of tanks comprising two light, two different medium, and one heavy. Your objective is simply to eliminate the opposition completely.

As well as having direct control over one of your tanks, you can direct the others by calling up the map display and moving the pointer to the required destination. It is also possible to select a new tank for manual control on this screen.

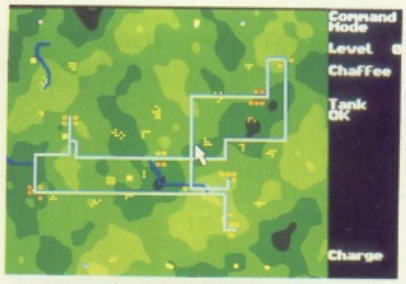
Once you are ready for a really meaty game you can select Strategy. This is similar to Attrition, but there are two possible objectives: completely eliminate the enemy, or hold a target area for a minute. The latter is easier said than done, since the target area is of quite a wide radius and it is not easy to keep individual enemy tanks from wandering into it.

The tank park shows the vehicles that you currently possess while those ranged along the front are available if you have sufficient credit

The other difference between Attrition and Strategy is the ability to buy and sell components of your force to achieve exactly the distribution of light and heavy tanks that you require. There are also other options like spotter planes and map fire (which involves heavy shelling of enemy occupied areas) which add to the complexities and possibilities of the Strategy game.

There are some nice features in *Conqueror* that are peripheral to the main game, like the rotating 3D tank displays and stats that can be called up at any time during play. Then there is the ability to pitch German Tanks against Russian, or American tanks and play for either side – that should keep everybody happy.

Conqueror is certainly a very impressive piece of software. To hardened simulator fans I can recommend it wholeheartedly. If you haven't tried this sort of software before then the accessibility of *Conqueror* makes it an ideal place to start. If you're an out and out arcade fan though there really isn't much here to interest you.



The map shows landscape features and the. Yellow and magenta dots denote opposing tanks

The Zarch inheritance quite obvious – note the pretty buildings that have been added

Knocked out in the arcade game – and the radar shows that the offenders have already fled

AMIGA

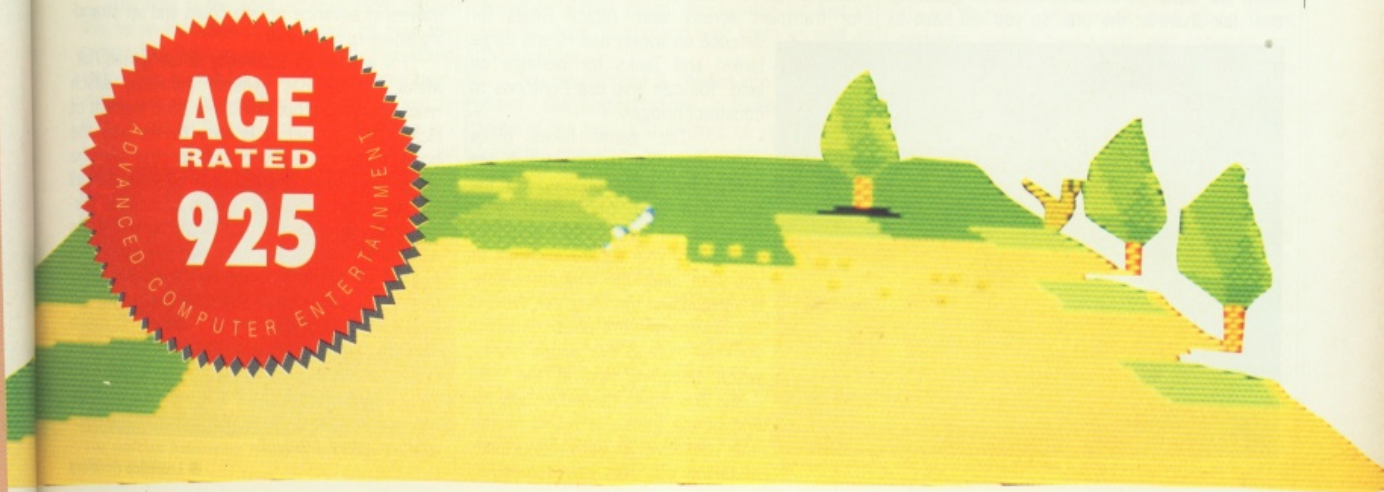
The game opens with a distinctive title screen and soundtrack and goes on to impress from there. Rainbow Arts have done a good job in getting the Amiga's comparatively unwieldy architecture to cope with a graphics system designed around a super fast RISC processor. Sound-wise this version is certainly superior.

GRAPHICS	9	IQ FACTOR	6	ACE RATING
AUDIO	8	FUN FACTOR	8	925

ATARI ST

On the graphics front there is little to distinguish this version with that for the Amiga. The sound though is quite a bit thinner and unconvincing . Where the ST really scores is on speed. The Amiga can't make use of its graphics hardware for 3D graphics, and the ST therefore has a slight edge.

GRAPHICS	9	IQ FACTOR	6	ACE RATING
AUDIO	7	FUN FACTOR	8	920



FULL METAL PLANETE

INFOGRAMES import French board-gaming via the micro

MENTION board games to your average man in the street and he will probably conjure up images of *Ludo*, *Snakes and Ladders*, or *Monopoly* – classic games that almost everyone is familiar with. There are a number of dedicated individuals, however, to whom board-gaming means a whole lot more. They can be found at evenings and weekends hunched avidly over the latest strategy game with a group of like-minded enthusiasts. American companies like TSR and Avalon Hill have been churning out games to satisfy such people for years.

For the average punter, however, such games can seem unnecessarily complicated. He doesn't want to have to plough through a thick tome of rules and then engage in a game which might last a whole day or longer. What he ideally wants is something original with easily grasped rules of play, in which most games will last for two to three hours and no more – perfect for a rainy evening!

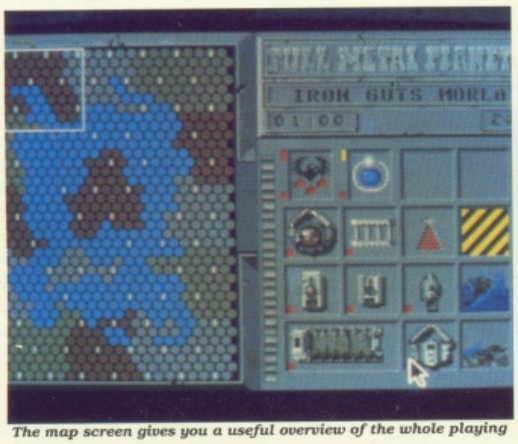
There have been a few games to emerge in this country that have managed to fulfil this rôle quite nicely, *Risk* and *Diplomacy* being two of the more obvious names that come to mind. In France, one of the games that has achieved a popular status is *Full Metal Planete*, and it is on that boardgame that Infogrames' micro conversion is based.

The game concerns mining in the far future. Your objective is to land your mining Freighter on a planet, and collect as much ore as possible within the time allowed. Naturally enough, there are other parties also intent on grabbing their fair share of the ore, so you will have to compete with them for it. The competition, I ought to point out at this juncture, is not only for the planet's resources but also for survival. It is permissible for players to not only destroy mining units belonging to opponents, but also to capture them.

Iron Guts Morla begins to deploy his forces in readiness for the conquest to come

The game is played on a landscape comprising mountains, level land, swamp, reef, and sea. This is divided into hexes which govern the positioning and movement of your mining units as well as the range of your attack/defence craft.

For the purpose of exploiting the planet's natural resources, and defending yourself, you have several types of craft: the Freighter itself, which is used for accumulating ore and craft, and ultimately transporting everything off the planet; Weather Hens for manufacturing new craft, transporting craft and ore, and predicting tides; Barges for transport across water; Crabs for transport across land; Attack Boats for defence on water; and Heaps (large tanks) and Tanks for defence on land. You can also use Pontoons to construct bridges.



The map screen gives you a useful overview of the whole playing area

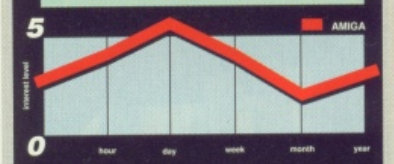
The game takes place over twenty-five rounds, which are divided into eight phases. On the first turn you must land your Freighter, on the second you deploy as much of your initial equipment as you wish within the area immediately surrounding the Freighter. Next is the first movement phase in which you can expend five action points, which becomes ten in the next round and fifteen thereafter until the end of the game. In round twenty-one you have an early opportunity of taking off. This can sometimes be beneficial if you already have a good cargo and might be in danger during the last four rounds. If you continue to play then there are three more normal rounds, and on the twenty-fifth round you must leave the planet.

The game would be difficult enough if it simply involved collecting ore, and conflicts with other players, but you also have the tides to contend with. These change at the beginning of every round, either exposing or flooding land. This means that you have to carefully plan your moves in advance or you could end up stranding some of your craft.

For what is an apparently simple game, *Full Metal Planete* has in-depth gameplay which relies on nothing but skill (there is no element of luck in this game). It is easy to see why the board game has enjoyed such success over the water, and since this conversion allows for all the subtleties of play involved in its tabletop parent then you really can't go far wrong with it. As an added bonus, you can play on your own against up to three computer-controlled opponents, and even design your own logo using the built-in utility (called Full Metal Palette – so much for Gallic humour). This won't be to everybody's taste, but if you are looking for something a little different which you will still want to play after one game then I thoroughly recommend Infogrames' latest product.

● Laurence Scotford

PREDICTED INTEREST CURVE



This is the sort of game you might approach tentatively at first. It will soon become apparent that the conversion works very nicely. Your interest will reach its peak once you have been playing for a while and become fully accustomed with the available options. The amount of time you spend with the game will undoubtedly begin to tail off over a period of time, but you are likely to keep on going back to it. Definitely a long term stayer.

RELEASE BOX

ATARI ST	£24.99dk	OUT NOW
AMIGA	£24.99dk	IMMINENT

No other versions planned.

AMIGA

This is not exactly one of those all-singing, all-dancing productions which squeezes as much as it can out of the Amiga, but then it doesn't need to be. Both graphics and sound are just right for the nature of the game (lots of very metallic clanging noises). The whole is a highly satisfying, most original game which is nice to come across amongst all the dross that seems to be crawling into our mailbag of late.Three disks packed with lavish graphics. Full marks for cutting down on unnecessary and annoying disk swaps. The sound FX are adequate, if a little unimaginative. Animation is very smooth, even in the horizontally scrolling parts of the game – something that is not too easy to achieve on the ST.

GRAPHICS	7	IQ FACTOR	8	ACE RATING 875
AUDIO	7	FUN FACTOR	8	

Yuk, Patrick has an encounter of the bloody kind

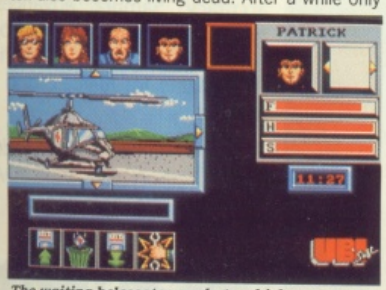
ZOMBI

Get seriously scarificed by UBI SOFT's horror feature

GEORGE Romero will principally be remembered for his rather graphic zombie horror movies. Despite their ludicrous basis they are quite entertaining and, occasionally, fairly gut wrenching if you are on the squeamish side, like me! Ubi Soft's game has evidently been quite heavily influenced by these films. Supplied with the software is a rather crudely drawn comic which relates events leading up to the start of the game.

The time is the 15th of April 1986 (could this be an indication of the length of time the project has been in development?). For some inexplicable reason the dead have become reanimated and are now walking the Earth to satisfy their craving for human flesh. Anyone who is bitten also becomes living dead. After a while only a few pockets of human survivors remain - to make matters worse they have to compete with each other for the few available resources they need to ensure their continued existence.

Near to your groups location there is a helicopter which can be used to escape to a safer place such as a remote, uninhabited island. Unfortunately you don't have enough fuel for a prolonged journey. Your task is to find this fuel. There is, however, a rival group also looking for fuel so you will have to contend with them as well as the zombies.



The waiting helecopter ready to whisk your team off to safety

The play screen is divided into several windows. The largest shows a three-dimensional view of the area just in front of your currently selected character. You can collect and manipulate any objects you see by clicking the cursor within this window. This is also used for combat with the zombies.

On the whole the zombies just pace back and forth ignoring you, but occasionally they will turn towards you and attack. At the beginning of the game you have nothing but your fists to protect you, but there are a number of weapons which can be collected to afford you more protection. If you managed to shoot a passing zombie in the head there is a satisfying gush of blood before the thing collapses to the floor in a heap.

Movement is achieved by clicking on of the four arrowed edges of the main window. The up and down arrows are context sensitive, so while they move you up and down if you are on a stairway, they will move you forwards and backwards when you are in a corridor.

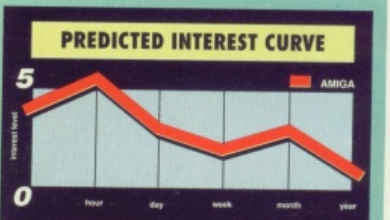
Initially you play with a team of four people. You can only move one of them at a time, so you must first select the relevant person. Naturally enough, moving around in a zombie infested area is quite a dangerous occupation, so it is quite possible that one or more of your party will meet with either death or zombification during the early stages of the game.

What is immediately appealing about this game is it's atmosphere – you really do get a sense of menace, especially when the moody David Whitaker soundtrack gets going. Lone zombies pacing backwards and forwards are not exactly frightening, but the way they suddenly turn and attack you is a well-executed bit of work. It is also quite harrowing to find yourself suddenly facing a whole horde of hungry zombies. This happens quite a lot if you stray too far from the main scenes in the game.

There seems to be quite a lot to do and plenty of places to explore in *Zombi*. The way that you coordinate your characters takes a little getting used to, but this doesn't really detract from the game. On the whole this is one of the more creative and atmospheric animated adventure games I've come across recently and should provide some involved entertainment for general gamers as well as hardened adventure fans. Worth the wait!

● **Laurence Scotford**

PREDICTED INTEREST CURVE



Your initial impressions will be quite favourable - the program is attractively packaged and the subject matter is enough to catch anyone's interest. Your initial expectations will be more than justified when you begin to play and sample some of the game's superb atmosphere. Of course the novelty will wear off after a while but your interest will rise again when you begin to make some real progress. Once you have solved the game you are unlikely to go back to it again, unless it's to cover some areas you still haven't explored.

RELEASE BOX

ATARI ST	£24.99dk	OUT NOW
AMIGA	£24.99dk	OUT NOW

AMIGA

Both this and the ST version look and play almost identically. The graphics are alternatively mysterious and gory, and enhanced in either case by Whitaker's superb soundtrack. The whole thing is controlled with the mouse so you don't have to worry about endless typing either.

GRAPHICS	8	IQ FACTOR	7	ACE RATING
AUDIO	8	FUN FACTOR	7	**860**

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SPACE HARRIER II

GRANDSLAM tries for Mega micro performance

HEART TO HART

Mike Hart is the 21 year-old programmer of the ST and Amiga conversions of *Space Harrier II*, employed at Teque software development company. His previous games include Krysalis' *Prison* and Mirrorsoft's *Passing Shot*. *Space Harrier II* took five months to write using Hisoft's *Devpac 2* assembler running on a ST Mega 4. Moving the game's floor correctly was the hardest thing to get right because all the 3D sprite moves are locked into the floor logic. Being a sprite-based game, the program has a massive sprite bank and 10 complicated sprite handling routines. The hand-written path data is the only coding aspect Hart is disappointed with, as it isn't authentic enough.

Surprisingly, Hart sees very few advantages in programming computer games – working indoors, the occasional free T-Shirt and the chance to put rude things in his source code are the only things that spring to mind. The list of things he dislikes about the industry is seemingly endless: management, hours, wages, workload and the fact that many young programmers get ripped off by software companies. "The coffee isn't that great either," smirks Hart. No wonder when I asked if he had any tips for potential games coders, Hart answered: "take up brick-laying or chicken farming".

As for the future, Hart believes there will be a trend towards cartridge-based console games systems, "the games side of 16-bit computers will die a death because it's a shrinking market riddled with piracy and virus problems". In the meantime, Hart will be working on an original 16-bit computer game licensed from a "well-known" comic magazine.

Space Harrier II blasts onto ST...

...and the original Sega Megadrive version

WHEN Sega's *Space Harrier* first hit the arcades back in '85, its 68000-power, 4096+ colour burst and gut-wrenching hydro-cabinent, assured it cult status overnight. Inevitably a flood of micro conversions followed, from Spectrum to PC Engine. Indeed, *Space Harrier* has become something of a yardstick to judge your machine's audio-visual capabilities by. Enter the 16-bit Sega Megadrive console last year – what's the first game Sega decides to produce on this cyberdeck? *Space Harrier II* on the Megadrive is brimming over with massive end of level guardian supersprites which move at lightning speed around the screen without any hint of flicker. Now Grandslam has decided to convert *Space Harrier II* to all major home computer formats (even MSX). An impossible task or incredible achievement?

Gameplay-wise, there's very little to *Space Harrier II*. You control a geezer who can fly all around the screen, simultaneously pumping out whitehot laser into a 3D forced perspective landscape. As you're doing this, the landscape speeds at you from the distance bringing with it obstacles and aliens of deadly presence – contact with them spells the loss of one of your lives. After you've dispatched a few aliens, you'll come across a mega end of level alien – who'll visually impress you, while churning out deadly laser blasts at alarming speed and accuracy. If you manage to take out this substantial sprite, it's onto the next level – with added aliens, obstacles and even more frightening guardians.

It's all pretty mindless and repetitive stuff – but it is immense fun. Any skills to be had from the game come from remembering the differing alien attack waves and obstacle movement patterns – certainly nothing to stretch the mind to any great degree. But this is a simple shoot'em-up after all.

Grandslam's *Space Harrier II* on the ST is so good a conversion, it makes the Megadrive redundant... until Sega comes up with the next generation of 16-bit blasters on its megadeck. The only thing *Space Harrier II* lacks is depth of gameplay – but that factor has never deterred any *Space Harrier* fan before.

Rik Haynes

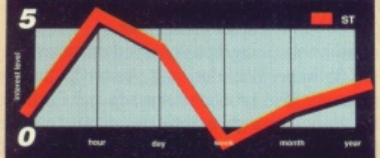
SPACE HARRIER II SPECS 'n' STATS

Version:	ST
Run-time Program Size:	250K (650K graphics stored on disk, 100K program, 100K gamemap, 50K miscellaneous)
Source Code Size:	420K
No. of Levels:	12 full levels, 12 guardian onslaught, final confrontation with Dark Harrier, plus 2 bonus levels
No. of Adversaries:	41
Max no. of on-screen Sprites:	51 of any size
Max. on-screen Sprite Size:	112x112
No. of Sound Effects:	6 + 2 digitised
No. of Soundtracks:	15
Average Screen Update:	12 frames a second
No. of on-screen Colours:	22

RELEASE BOX

ATARI ST	£19.99dk	OUT NOW
AMIGA	£19.99dk	IMMINENT
SPEC 128	£9.99cs £14.99dk	IMMINENT
C64/128	£9.99cs £14.99dk	IMMINENT
AMSTRAD	£9.99cs £14.99dk	IMMINENT
MSX	UNDER DEVELOPMENT	

PREDICTED INTEREST CURVE

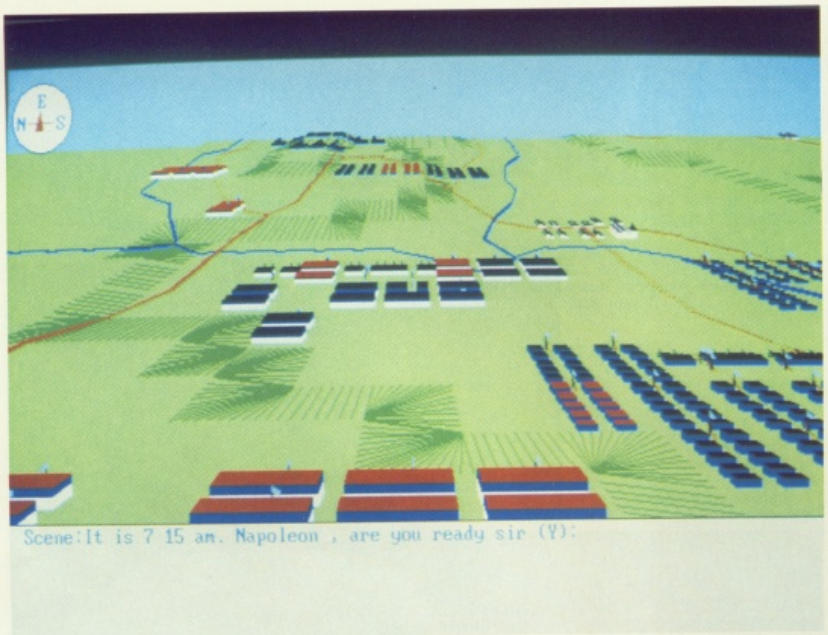


***Space Harrier II* on the ST – you've got to be kidding... until you actually loaditup and gasp at the quality of this conversion. This admiration peaks after a days play, the flat and repetitive gameplay starts to make a serious down-turn on your fun. This hits rock-bottom a week later when your completely sick of playing the game. Fortunately *Space Harrier II* isn't a wasted purchase in the long run, because you occasionally pick it up and have a mindless – but enjoyable – blast every so often.**

ATARI ST

Amazingly, the ST version runs just a little slower than its Megadrive parent – without the loss of any of the consoles superb graphics. In fact, the Sega's graphics data was sucked straight out of its ROM and into the ST's source code. Audio is no great shakes, but then neither was the Megadrive's.

GRAPHICS	8	IQ FACTOR	1	ACE RATING
AUDIO	6	FUN FACTOR	7	819



As Emperor Napoleon it is time to survey the battlefield and deliver your first set of orders. Ahead of you can be seen your forces facing some of the enemy perched upon the Pratzen Heights.

AUSTERLITZ

PSS/Mirrorsoft run riot in Europe, but is history repeating itself?

PSS are currently riding on a wargaming glory wave following the release of the highly acclaimed *Waterloo*. Apart from the overriding historical accuracy it featured a quality of graphics unseen in any wargame, and the command system was more reminiscent of an adventure, with a competent parser breaking down whole paragraphs of typed commands.

Between *Waterloo* and *Austerlitz* the programmer also produced *Armada* and *Borodino* for Atari. Although graphically similar to Waterloo, this fact was generally overlooked by wargamers who were all too happy with the new style software hitting them.

Austerlitz has also surfaced in much the same vein. The graphics are in the same style as its sisters, and although the commands are different the play system remains the same. Too much of a good thing is all very well, but too much failing too be different soon starts to wear thin.

Looking down the line at your battle-ready troops

Set in Moldavia in the early nineteenth century, *Austerlitz* chronicles Napoleon's greatest battle, against the might of the Austro-Russian army. Naturally you're given the choice of which side to play.

Most of the standard options are apparent at the start up – except for a feature which allows you to change the start up orders for each side. So in theory you can start the game with the Russian forces surging forward to a rapidly surrendering enemy.

With you at the top of the command chain, all orders are issued to the divisional generals, who in turn pass the orders on to the respective platoons. It sounds complex, and it is. Because of the historical edge it takes quite a time for orders to be carried out. After all you're a hundred and thirty years short of the walkie talkie. While sometimes frustrating when a division is being hammered, it does allow for some well timed cavalry charges.

If you've had no experience with this system before, the way commands are issued can prove frustrating. Orders like "Bessieres, take support from Bernadotte and form a defensive around Kobelnitz" will always confuse the unwary.

Despite all the glamorous extras Austerlitz still plays like any of the bland 'old style' wargames, which came as a surprise to me – it looked as though it could have been a case of all graphics, no gameplay.

Attention to detail is excellent. The manual contains a full background as to how this particular battle came around, what happened during the battle, and who did what in the aftermath. Extremely useful in planning which route not to take in order to come out on top. It's attention to detail and ability to follow the battle to it's outcome that produces the atmosphere. You can fight the battle just the way Napoleon fought it, or opt for a completely different approach.

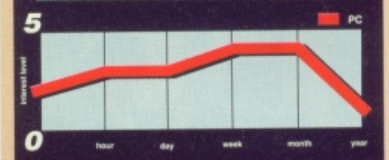
For all the good points there's one real factor that weighs heavily against *Austerlitz*; the lack of variety between it and its three predecessors. Once you've played one you've got a good idea of how the rest are going to look. A designer option would have helped immensely, it's a pity this facility has been overlooked.

Somehow I don't see this style of wargame having the lasting effect that is common with the popular SSG series. A recommended first time purchase, but if you have any of the others there just isn't any point.

● **Mark Patterson**

RELEASE BOX		
ATARI ST	£29.99dk	IMMINENT
AMIGA	£29.99dk	IMMINENT
PC	£29.99dk	OUT NOW

PREDICTED INTEREST CURVE



The first real task is wading through the manual and getting to grips with the control system, which is no mean feat. Following that you need to sit down and really experiment with commands and getting used to the overall play system.

Once the shell's been cracked Austerlitz provides some really absorbing challenges. The ability to change the start up orders allows the scenario to be varied for each game, throwing open a whole new batch of different situations.

In the long term the lack of a design feature causes Austerlitz to fall short of the mark, and it's this limitation that finishes Austerlitz once the play system is fully mastered.

PC

The graphics are very impressive, especially for a wargame. Naturally there's no sound, but that isn't of any consequence.

Mainly Austerlitz serves as a change from the norm. It's absorbing and interesting, and provides plenty of scope for pen and paper planning. Necessary because of the amount of brain work need to keep track of everything.Three disks packed with lavish graphics. Full marks for cutting down on unnecessary and annoying disk swaps. The sound FX are adequate, if a little unimaginative. Animation is very smooth, even in the horizontally scrolling parts of the game – something that is not too easy to achieve on the ST.

GRAPHICS 7		IQ FACTOR 8	ACE RATING	
AUDIO	N/A	FUN FACTOR 7	732	

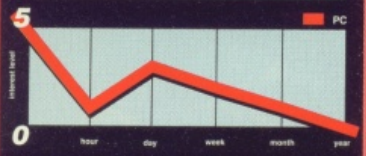
HARLEY DAVIDSON

The open road; the throbbing Harley Davidson between your legs; the girls; the comradeship; the leather; the heavy metal...

Can a game give you all this?

MINDSCAPE think it can...

PREDICTED INTEREST CURVE



As an ex-despatch rider and bike freak, I've always wanted a hog of my own. Excitement was nearing fever pitch as I got hold of the game, but it didn't take very long for it to plunge right down to deepest despair once I'd hit the open road.

Trouble is, the real joy of bikes is riding, and the riding in this game just isn't up to scratch – particularly not if you have a slow PC (I played it on a 386).

However, after a while the game began to exert a certain monotonous charm over me as I moved from town to town. I began to take my charisma levels more seriously and indulge in more events.

I never got to Sturgis, though. *Harley Davidson* is a bit too like the real thing: nice to look at, nice to have as a second bike, but a bit expensive and prone to excessive vibration.

RELEASE BOX

PC	£24.99dk	OUT NOW
ST	£24.99dk	APRIL 1990
AMIGA	£24.99dk	APRIL 1990

PC

Unprotected and supplied on two 5.25" disks, *Harley Davidson* is well documented and quick to get up and running. Unfortunately it's not so quick in gameplay terms, with slow responses and mildly jerky, but pretty, graphics. Sound is a dead loss unless you have an Ad Lib board.

GRAPHICS	7	IQ FACTOR	4	ACE RATING 675
AUDIO	2	FUN FACTOR	7	

BECOME the Ultimate Biker God. That, and nothing less, is your aim in *Harley Davidson*. Doubtless long-haired, greasy bearded, pot-bellied, leather jacketed, social deviants are right now beating a tarmac pathway to their nearest software shop to grab a hold of the world's first official Hog Simulator.

Talking of hogs, this one IS a bit of a pig. The program aims to blend arcade action (bike riding style) with strategy as you equip your bike, negotiate the rocky roads of Maine USA, encounter other brothers, and make your way to the great hog trough of Sturgis where your biker endurance will be rewarded. By biting the heads off chickens, no doubt.

You start in quasi RPG fashion by distributing points between various essential biker skills, ranging from engine maintenance to charisma (mainly for picking up chicks, eh what?). You then take to the open road and head for the next town.

The road sequences aren't hard to master. Unlike some bike sims, this one is pretty easy to conquer. As the landscape scrolls by you change up and down your six gears by depressing the control and up-arrow keys simultaneously (joystick is recommended, a mouse option is available but not so useful). Avoiding rocks, puddles, cars and other hazards you carry on to the next town, stopping on the way (if you fancy) to help a damsel in distress beside her broken down vehicle. You can then (if she fancies) give her a lift to the next town for a reward (usually cash, but possibly an item of biker value).

Arriving at the next town, you refuel. This doesn't just have to mean refuelling your bike – you can also top up your own pleasure circuits by rolling in the hay with the female filler attendant. This doesn't seem to result in anything (certainly not a graphic display) other than a higher bill for fuel. Bikers, it seems, haven't heard of AIDS yet – or at least not in this game, they haven't.

After frolicking with the good time girl you can choose any of the other options available in town: shopping for parts (ranging from a helmet to a new engine), fixing your bike, and having a good time with the local brothers.

Fixing your bike simply involves choosing the part that needs attention (shown on a special status screen that gives you a health bar-chart for each part) using your maintenance skill. Unless you're pretty nifty (and set your maintenance skill level high at the beginning) this isn't likely to have too much effect.

The local brothers, however, have more to offer. You can indulge in any one of five events,

Out on the open road. Watch out for damsels in distress on the verge, they may appreciate a ride and pay you.

The weenie run: disgusting, eh? But then you ARE disgusting, you fat, hairy, slob!

each of which offers you the chance to earn money, increase your standing amongst the bro's, and hopefully have a little fun in the process.

The events range from the finicky Slow-Ride Contest which is probably harder in the program than it would be on a Hog. I know that Harley's (like any big twin) are going to pack up at low revs, but this is ridiculous! Hurt pride took me on to the Drag race, which was a lot more fun and simply involves getting the revs right up before slipping in the clutch. The game lets you kick in first gear at practically any engine speed, leading to wheelies and a generally hairy race against the bro's.

Other events include Hill Climb (up hill in low gear, dodging missiles from your 'friends'); Poker Run (grab cards from bystanders to get a winning hand, preferably without flattening them); and Weenie Run, in which a non-vegetarian lady snaffles frankfurters hanging on strings above the road as you shoot down the highway.

Finally, you can go partyin', which is of more interest for the boost it gives to your energy levels than it is for the Bob Seger tunes.

Mindscape have really tried to pack a lot into *Harley Davidson*. There's no shortage of wayside attractions at every stage of the journey to Sturgis, but, like most games that try to overwhelm you with variety, none of the elements really impress by themselves. The strategy elements (buying new engines, increasing your standing with the bro's) aren't well-developed enough to compensate for the lack of punch and the arcade sequences are too jerky and slow by modern standards. Like the real Harley Davidson, the game looks great, but once you've ridden it most people will start yearning for a highly tuned Japanese megamachine.

● Steve Cooke

Penny goes plunging towards the evil Borf's ship while the helpless Dexter looks on...

SPACE ACE

READYSOFT/EMPIRE

bring Don Bluth's

arcade movie to the

small screen

IT has long been the dream of many people involved in computer entertainment, whether as producers, consumers, or critics, to see the complete integration of film and interactive computer technology. The result would be a film in which the player was the star – the actions he or she might take would affect the way the plot evolved. At present there are movies which can draw on all the magic of modern film technology to create, if necessary, completely new environments. But for all its spectacle and imaginative brilliance, the movie is a closed medium – we have no option but to sit back and let it all soak in.

Computers, on the other hand, are a completely different story. Like the film maker, the programmer is also capable of creating new worlds, but, unlike a film, a computer game is something that we can all participate in – we have the power to affect the outcome of the games we play. But even the most expensive home machines are limited. We can never hope to achieve the enthralling realism afforded by film, or can we?

Animator Don Bluth has certainly made positive moves in that direction even if he has only really managed the first tentative few steps. Bluth's background was, not surprisingly, very much in movies (he was an animator for Disney and is still involved in the production of animated feature film's today), but he also has a great respect for the potential of the computer as a medium for entertainment. His first production in this field, the *Dragon's Lair* arcade machine, was an attempt to combine the best of both worlds.

The machine made use of traditional animation stored on a laser disc (which was still a fairly juvenile technology back in 1983). The animated scenes were shown to the player who had to move a joystick at an appropriate moment in order to see the hero to safety. Get it wrong and you are forced to witness your rather ugly end, get it right and it's on to the next scene.

Space Ace is more of the same, only the plot is more original and the animation is a lot funnier. You take the part of the heroic Ace (what a superb name), in a mission to save your beloved Kimberly from the evil Commander Borf. Unfortunately Borf has managed to zap you with his Infanto Ray which has turned you into your youthful alter-ego, Dexter. In this weakling guise you set out to save Kimberly and defeat that blue-skinned blubber-gut Borf.

You may recall that *Dragon's Lair* was treated to a series of rather lame home computer conversions which had none of the visual appeal of the original arcade game and even less playability. Readysoft's conversions of *Space Ace*, you will be pleased to hear, do not suffer in the same way. Both visual and audio content is absolutely superb to the extent that you can't wait to see what the next scene has in store, and the next, and the next... and because you can save your position there is less drudgery involved in doing so.

Again you must view each scene and make the appropriate joystick move at the right time in order to save your skin, but this time there is just that little bit more playability which actually makes a world of difference. You get quite a few minutes of animation on four discs for your money, but what a lot of money it is for what is essentially a very good audio-visual entertainment with a bit of interactivity thrown in.

● Laurence Scotford

Ouch! A tardy joystick movement means Dexter takes the full force of Borf's laser.

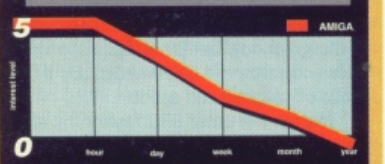
RELEASE BOX		
ATARI ST	£44.95dk	IMMINENT
AMIGA	£44.95dk	OUT NOW
PC	£44.95dk	TBA

AMIGA

At last, a game that recognises the potential of the Amiga. Why is it that the Audio-Visual industry has been making great use of this machine for some time now because of its superior graphics and sound capabilities, while the software industry continues to treat it as an ST in a different box. It's nice to see that Readysoft have squeezed out of it some of the tremendous power it is capable of. A superb production on every front except the human involvement – which, as with Dragon's Lair, remains limited.Three disks packed with lavish graphics. Full marks for cutting down on unnecessary and annoying disk swaps. The sound FX are adequate, if a little unimaginative. Animation is very smooth, even in the horizontally scrolling parts of the game – something that is not too easy to achieve on the ST.

GRAPHICS	10	IQ FACTOR	4	ACE RATING 725
AUDIO	9	FUN FACTOR	7	

PREDICTED INTEREST CURVE



At this price you would certainly have to have very high expectations of Space Ace to want to shell out for it. Your initial expectations won't be disappointed either – visually and aurally it's absolutely stunning, you've just got to admire the brilliant animation. After a while the charm is starting to wear a bit thin, but you are probably beginning to make some progress at this stage, and the prospect of having successive scenes revealed to you will keep your interest from waning. It shouldn't take you too long to get right through this one. Once you've done it you'll maybe play through it once or twice more to show a friend, but then it'll more than likely be consigned to a dusty shelf for good!

SIDESHOW

Experience all the fun of the fair with ELECTRONIC ZOO/ ACTIONWARE

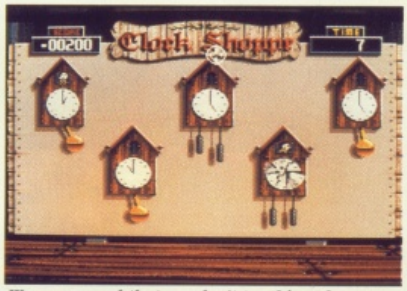
LIGHT guns seem to be coming back into vogue these days. If you are a veteran gamer you will probably recall those ancient consoles with five or six built-in games. On the whole they were variations on *Pong*, but some machines also had simple target games which involved obliterating a large white blip that bounced around the screen. For the latter purpose a cheap plastic light gun was provided along with the paddles that controlled the other games.

When the early consoles began to lose out to their more sophisticated counterparts then the good old light gun went into decline too. Recently, however, there has been a resurgence of newer, more sophisticated light guns. Companies like Cheetah Marketing and Amstrad have been busy producing light guns for the Spectrum and CPC (although this is little more than a ploy to keep sales of 8-bit machines as healthy as possible).

The trend has been slow to catch on in the 16-bit market – although you can readily obtain trakballs, graphic pads, light pens and so forth for the more sophisticated machines, light guns are harder to come by. American company, Actionware have now rectified that deficiency (at least as far as the Amiga is concerned), by producing a phaser light gun along with several games that support it. The latest of these is *Sideshow*, which, according to the manual, they developed as a contrast to the violent themes in their earlier phaser compatible games.

This game, as you might have gathered from the title, is based around the sort of fairground events where you take pot shots at things in an attempt to win a cuddly bunny that probably costs less to buy than the money you paid to win it in the first place (phew).

There are eight events you can play: *Balloons* has you popping them to find a hidden pattern; *Balls* involves shooting at green balls while avoiding red ones; *Potpourri* is the classic shooting gallery where you can pop off ducks, planes, and so on; *Strength* requires you to make weights shoot up posts to hit bells; *Knives* gives you the opportunity to chuck sharp objects at a rotating clown (actually you're supposed to miss him); *Clock Shoppe* gives you a chance to get your own back on all those



We recommend that you don't try this at home, since a smashed clock face is likely to provoke a little revenge shooting!

annoying cuckoos by shooting them as they appear from their clocks; *Haunted Hill* is another classic in which you shoot at various spooks and nasties before they disappear; and last, but by no means least, there is the *Dunk Tank* in which quick shooting will give you the satisfaction of seeing poor Willy get wet.

Although there is a facility within the program to ensure that your light gun is properly calibrated, I still found it very difficult to shoot with any accuracy, even at a fairly close range. This could, of course, be an indication of my abysmal shooting skills, but I suspect that most people will actually experience similar difficulties. Playing with the mouse is a lot easier (and, indeed, the only option open to you if you do not possess the phaser).

You are not free to play any event as and when you wish. You begin with a limited number of tokens and before you can play some of the more expensive events you must win a few tokens on the cheaper and easier ones. Unfortunately it is no good just selecting an event you are good at and playing it until you build up a bundle of tokens, because a booth will be closed if you win it three times.

You also have to watch your hunger level – if this gets too low you'll have to pay a visit to the Food Stand to top up, which will also use up some of your hard earned tokens.

On the whole, *Sideshow* is a highly entertaining game which will probably appeal to mum, dad, and kid sister as well as seasoned games players. There is a lot of disk swapping, which can be quite frustrating, but this can just about be forgiven considering the variety of gameplay you are treated to.

No! The gunsight is not for taking pot shots at the milling crowd! This is Actionware's non-violent game...

AMIGA

Absolutely no complaints here as far as presentation is concerned. All of the graphics are very colourful and well designed (you get a real sense of depth in the *Balls* event, for instance). Sound is suitably carnival like, even down to the crowd noises in the booth selection screen. My only real gripe is the continuous disk swapping which is extremely annoying – owners of a second disk drive are laughing.

GRAPHICS	8	IQ FACTOR	3	ACE RATING 850
AUDIO	8	FUN FACTOR	7	

RELEASE BOX

AMIGA	£24.99dk	OUT NOW

No other versions planned.

PREDICTED INTEREST CURVE

Let's face it, Carnival Sideshows are not the sort of thing that are going to get your average games player tremendously excited from the word go. Having said that, most people will enjoy this game once they start playing it properly. Your enthusiasm will probably die a little once you've had a few goes, but this is the sort of game you are likely to go back to intermittently.

SET PHASERS TO STUN, MEN!

The Actionware Phaser light gun for the Amiga is not available in the UK at the time of writing, but Electronic Zoo have plans to rectify that situation in the near future. They hope to be marketing the gun at about the same time as they import Actionware's next game, *Creature*. They may also be bringing us some of the earlier Actionware releases. The projected price for the gun is £24.99.

There are also a few bonus features thrown in, like random events, Easter Eggs with a secret purpose, and the ability to design your own face for Willy in the Dunk Tank. If you are looking for something a little different that will appeal to a wide age range then *Sideshow* is definitely worth a look.

● **Laurence Scotford**

CEREBRAL SOFTWARE

"As the disk loaded, I felt drawn into different reality, an alternative world where I assumed the identity of another"

CONFLICT

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IBM PC • COMING SOON - Amiga • Atari ST

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Amiga • Atari ST

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Screenshots may be taken from a different version.

Scenic Sierra village: the shopkeepers are all in the pub getting drunk

SIERRA take the system that created Leisure Suit Larry and add RPG concepts – surely this has to be a winning formula?

HERO'S QUEST

IT had to happen. Sierra, not content with being America's number one graphic animated adventure house, has finally cottoned on and introduced RPG elements into its games. Imagine *Leisure Suit Larry*, *Kings Quest*, *Police Quest* – all brilliant games – and then add the excitement of creating your own character and building him or her up while you play. Surely this has to be a recipe for unmitigated gamesplaying bliss?

Unfortunately, where *Heroes* is concerned, the ingredients haven't quite done justice to the recipe. Here goes: **TAKE ONE SIERRA ANIMATED ADVENTURE SYSTEM, COMPLETE WITH SUPERLATIVE GRAPHICS AND SIMPLE TEXT ENTRY.** No problem there, even if we do have to ignore the usual slow speed of Sierra games when running on anything less than a Cray Mk. 10 or an equally unaffordable 386 VGA PC. *Heroes*, however, is noticeably faster than the earlier products and the system that gave us *Leisure Suit Larry* can't go far wrong.

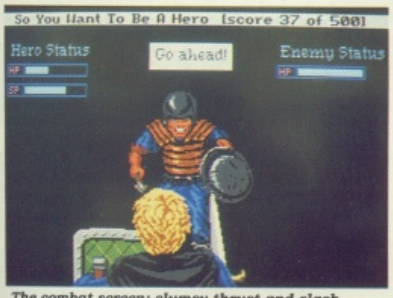
Next: **TAKE A GRIPPING SCENARIO.** Oops, no gripping scenarios available. The dramatic inspiration that gave us the child slave in *Kings Quest III*, the desperate Rosella in *KQIV*, or the absurd Larry Laffer in the *Leisure Suit* games has obviously run out here. Instead we get a chap who simply wants to be a hero in Spielburg (flattery will get you nowhere, Sierra). Heroes in fantasy games are ten a penny. What we want is character interest, chaps, and there ain't none here.

Next: **ADD GENEROUS DOSE OF RPG ADDED INTEREST.** Disaster. The sack of RPG Added Interest is totally empty. Instead of giving us a meaty team of adventurers as in *Bards Tale* or *Ultima*, we have a single player character. He cannot recruit anyone and interact with other characters any more than any of the other normal characters in Sierra games.

Finally: **TAKE RIP-ROARING COMBAT SYSTEM AND KICK ASS.** Are you kidding?? Sierra games have class, not ass. Jettison the rip-roaring combat system and instead pop in a single screen with graphical opponents clumsily stabbing at each other. Invoke a few routine 'dodge' and 'stab' manoeuvres, slow it all down nicely, display graphs of strength and stamina. Forget all about strategy (you can't really have any anyway, since there's only one player character) and forget about action (it's too slow). Finally, make it all rather easy to escape from if things get tough (they do).

All that is, in essence, the story of *Heroes*. But it's a story with a happier ending than you might have expected. Underneath the RPG pretensions you have another Sierra animated 'adventure cartoon' with superlative graphics, a weaker story line than other recent Sierra releases, loads of puzzles, and a healthy modicum of enjoyment. Forget, therefore, about the RPG innovations as they're not really up to the expectations they raise. The only nice addition is the ability to play a thief, magic user, or warrior which adds some variety and a few minor spells to the scenario. Otherwise, this is standard, but very beautiful, fare for Sierra addicts, who have quite rightly discovered that you don't need sizzling arcade action or mega-sophisticated parsers to make a good game...for those who can afford it.

● **Steve Cooke**



The combat screen: clumsy thrust and slash manoeuvres don't get the adrenalin going as much as they should

PC

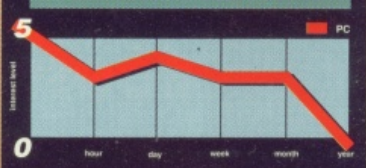
Runs a bit quicker than some of the other Sierra PC games, and the graphics in EGA and VGA are superlative. CGA is, as usual, a bit tacky. The sound beeps are more frenetic than ever, and if you've got an Ad Lib sound card, MT32, Games Blaster, or IBM sound card you'll get the full, glorious stereo blast.

GRAPHICS	9	IQ FACTOR	9	ACE RATING
AUDIO	7	FUN FACTOR	8	825

RELEASE BOX

ATARI ST	£34.99dk	IMMINENT
AMIGA	£T.B.A.	T.B.A.
IBM PC	£43.99dk	OUT NOW

PREDICTED INTEREST CURVE



When you get this one out of the box you're practically exploding. Tons of literature, umpteen disks (3.5" and 5.25"), and the promise of your favourite game system AND the thrills of character creation.

A little while later the excitement dies down as you realise you can't really create amazingly interesting characters: there are only three types, no sex discrimination, and only standard attributes (strength etc). There are a few skills such as lock-picking and weapons skills but again no surprises.

Once you get into the game, you soon get caught by the Sierra blend of superb graphics, several locations, and the promise of lots of puzzles. The combat system, however, proves a big disappointment, and it finally you settle down to a typical Sierra adventure with only a few bits of added interest. And, of course, when you've solved it, you've finished with it.

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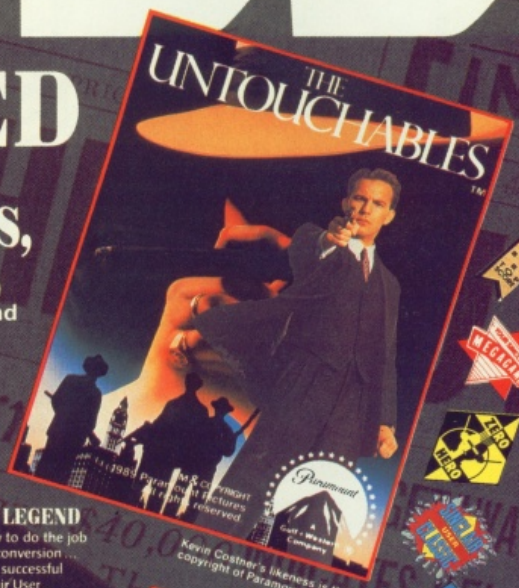
"a fine example of how to do the job properly ... a cracking conversion ... easily one of the most successful licences to date" Sinclair User



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ALL FOR A FIVER!

Laurence Scotford looks at six titles in the new 16-Blitz range published at £4.99 by Virgin Mastertronic

ENTERPRISE (PC)

A golden oldie from Melbourne House (remember them?) which casts you as a merchant space pilot. Your aim is to earn enough money to retire to Paradise Planet. This is done by collecting minerals and selling them to the inhabitants of the innumerable planets in the known universe. As well as building up a fortune you must also insure your ship and its contents, buy food and fuel, and make the occasional repairs.

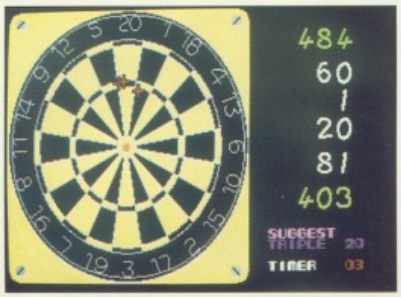
Once you have mastered the hyperspace jumps and landing on planets you can begin to converse with the aliens. At this point the game begins to bear an uncanny resemblance to a very ancient program called *Eliza*. This was a clever piece of programming that picked up on common parts of speech and analysed them to the extent that it was able to give you apparently intelligent replies.

What you have here is essentially a poor man's *Elite*. It has a few nice touches but I wouldn't be prepared to lay bets on its long term playability.

ACE RATING: 500

WORLD DARTS (PC)

Given half a chance, bored programmers will spend their time trying to simulate absolutely anything and everything on their favourite machine. The latest victim is the classic game of Darts. In this implementation a hand wielding a dart in a rather unsteady fashion drifts with increasing rapidity across the screen. By using the cursor keys you can change its direction but you can never hold it still. Once it is positioned roughly where you want it a quick flick of the space bar is all that it takes to send the dart flying home.



The control method takes a little getting used to, but there is a fun game to be had here once you got the hang of it.

ACE RATING: 675

SPEEDBOAT ASSASSINS (Amiga)

At first sight this looks and feels a lot like the old arcade game *Road Blasters*, only water has been substituted for tarmac. Your task is to liberate four important harbours that have been taken over by enemy forces. There are three stages involved in achieving this.

First you are dropped off by helicopter and must guide your unarmed speedboat through a narrow channel of floating mines to gain entrance to the harbour. It is easy to do this without danger by going slowly, but unless you take it at speed you will lose a substantial bonus.

Next comes the main meaty part of the game which involves you speeding across the harbour taking out mines and various craft. Your weapons can be upgraded by docking with the helicopter (not an easy manoeuvre when you've got the enemy throwing hell at you!) You must destroy four red communications towers to neutralise the harbour.

Once you succeed in this it's on to the final stage – blowing up the marine equivalent of an alien mother ship. Hit the battleship twenty to thirty times and you are off to the next target. This last stage however, is so difficult that there is more luck than skill involved.

On the whole a reasonable challenge, but it won't be long before your eyes are glazing over

ACE RATING: 650

CALIFORNIA PRO GOLF (PC)

There have been several very good golf games available for a variety of computers over recent years, *Leaderboard* and *Jack Nicklaus* for instance and it seems to be becoming a popular past time for golf addicts who can't stand the rain. If you're a bit short of cash however, then this is a viable alternative. All of the usual features are here: both three and two-dimensional views of the hole, wind conditions, club selections and the ability to control shot power, hooks , and slices.

On the whole (or should that be hole?) this is a pretty reasonable golf simulation for the price.

Worth a look if you fancy a round without leaving the comfort of the nineteenth.

ACE RATING: 700

KELLY X (ATARI ST)

Way back in time when the Spectrum was still one of the best micros to be had, Imagine produced an odd little monochrome game with wireframe graphics in which you played a space trashman pushing 3D objects into a black hole. *Kelly X* also has you destroying pieces of floating space junk, and apart from the fact that the wireframe graphics have been replaced with solid vector graphics the two games are

tediously similar (in fact the ancient Imagine effort was twice as playable). Five minutes will be enough to have you reaching for the reset button.

ACE RATING: 390

ROAD WARS (ATARI ST)

I really can't understand the thinking behind the re-release of this game. It went down like a lead balloon when it was first released as a full price game, and even at this low price it just doesn't cut the mustard. The game has you speeding down a curved road shooting various rogue items, provided you can manage the unwieldy controls that is. A complete waste of a fiver!

ACE RATING: 300

THE NEW ICE AGE DAWNS

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THE STRATEGY GAME

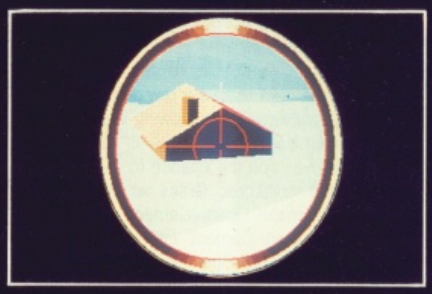
MIDWINTER

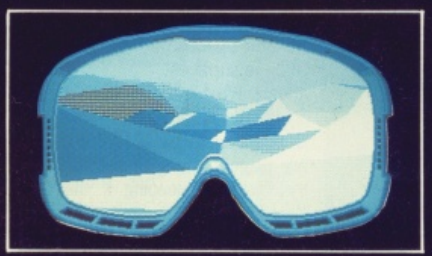
OF THE DECADE ARRIVES

As a new Ice Age dawns in Rainbird's gigantic new classic, strategy gaming also enters a new era. For Midwinter is a genuinely original concept that launches revolutionary techniques onto the home computer screen.

The scenario is convincingly realistic as a new Ice Age grips the world. Together with a small group of pioneers you have colonized the Midwinter Isle, a 160,000 square mile land mass now under threat from invaders intent on seizing your sanctuary.

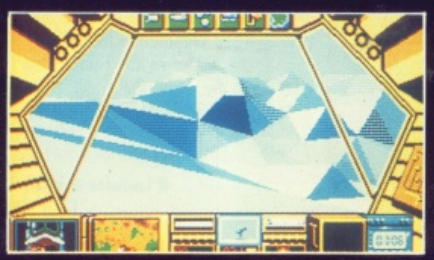
Compelling action and strategy take place across a spectacular 3D fractal generated landscape with its stunning geographical accuracy. You control 32 personalities, each with different qualities, skills and complex personal relationships. Enemy movements can be tracked, and battle plans made, using the incredibly detailed on-screen map.





In your bid to defend the life-supporting heat mines, you can ski, hang-glide, travel by snow buggy or cable car, snipe and sabotage the enemy. There is no easy way to win, but the game's unique depth and absorbing complexity will keep you trying until you do.

The deep Midwinter is upon us. Be prepared for a long and exciting battle against its elements.



PRO TENNIS TOUR

ACE RATED 900 — ADVANCED COMPUTER ENTERTAINMENT

Anyone for tennis?

UBI SOFT/

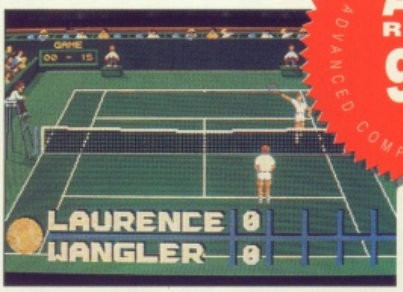
BLUE BYTE are!

SPORT simulations for popular micros have come and gone in recent years although very few have left more than a fleeting impression before a player moves on to other games. The problem with sports simulations is that something as fluid and indeterminate as the performance of the human body is impossible to simulate with any accuracy. The joystick waggling track and field type games come closest because they at least provide some sort of physical test. As far as other sports simulations are concerned, what you actually end up with is an arcade game that makes use of the rules of a sport, but otherwise bears little resemblance to the experience of actually participating in the game in question.

This has not stopped many programmers from making many brave attempts to do just that. One of the earliest attempts to capture the essence of tennis in a computer game was Psion's *Match Point*. This employed a high 3D perspective and was quite fun to play, but didn't really allow for all the subtleties of the game. Then there is Imageworks' *Passing Shot* which is a conversion of the arcade machine. But while this is a good game it employs an overhead view – again, not exactly helpful for developing subtle shots.

Now Ubi Soft have a had a crack at a tennis simulation and come out looking good. *Pro Tennis Tour* has been selling for some time now in France as *Great Courts* and going down a storm – I'll be very surprised if the same thing doesn't happen here.

Again you are presented with a three-dimensional perspective view of the court, which works well apart from the apparently huge size of the ball when it is at the opposite end of the court. The joystick (or keyboard) controls your movement across the court. Shots are played by pressing the fire button to swing and then releasing it to actually hit the ball. Unfortunately you can't move the player while you are swinging, so you have to make sure that you are positioned correctly before you swing the racquet. This can lead to some rather tricky shots if you have to slide right over to the other side of the court first.



Where's that ball going? Not where it should be, that's for sure!

The direction of your shot is determined by your distance from and relative position to a cursor which marks the destination of the ball. This takes a little getting used to, but the system works quite well once you have become accustomed to it. Additionally the crosshair can be switched off by selecting either Advanced or Professional, as opposed to Easy mode.

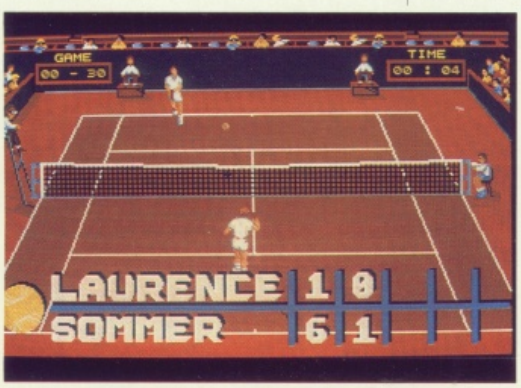
Serving is also accomplished with the use of a cursor, only this time you control its position. Again it takes a while to get used to this and you can expect to lose a few points through double faults while you are growing into it.

The main part of the game is tournament play which gives you the chance to sample several different surfaces: Grass at Wimbledon, Clay at the French Open, Cement at the Australian Open, and Cement either covered or uncovered at the U.S.Open. In tournament play you begin ranked 64th and must play successive computer controlled opponents. They play extremely well, so you are going to have to really develop a good technique if you are to stand any chance at all of winning a match.

Fortunately there are comprehensive practice options which allow you to improve your service, or return balls delivered by a machine using one of six different programs. You can also select to play against another person using the second joystick port. This does mean that one of you will have to play at the far end of the court, but this is alternated so both players get a chance to play the easy end. As with the tournament, the practice options can be played on all three surfaces.

What really makes this particular tennis simulation stand out is attention to detail. Witness the line judges getting tennis neck, or the machine bleeping if the ball skims the net. The sprites are not that attractive, but they are realistically animated. This is easily the best tennis simulation to date and should keep Wimbledon fans happy during the winter months until they can get the real thing on their screens again. Highly recommended.

● Laurence Scotford



Not so hot on clay! The score shows that this particular reviewer needs a lot more practice...

AMIGA

Although the graphics are not quite as pretty as they might have been, they are enough to convey the atmosphere of the real thing. The sound effects also help enormously in the atmospherics department - even the thunk of the ball hitting the ground changes depending on which type of surface you are playing on.

GRAPHICS	6	IQ FACTOR	3	ACE RATING 900
AUDIO	8	FUN FACTOR	9	

PC

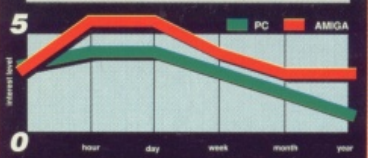
The sprites are a little crude even on EGA, but again the animation can't be faulted. As per usual with PC games, the sound leaves a lot to be desired, but Blue Byte have done quite a good job at squeezing as much out of the PC's feeble buzzer as they can. One useful feature is a menu that allows you to indicate which type of machine you are running the game on. An adjustment for speed can then be made (this prevents you from having to return a supersonic service on a 386).

GRAPHICS	5	IQ FACTOR	3	ACE RATING 850
AUDIO	5	FUN FACTOR	8	

RELEASE BOX

ATARI ST	£24.99dk	IMMINENT
AMIGA	£24.99dk	OUT NOW
SPECTRUM	£9.99cs £14.99dk	IMMINENT
C64/128	£12.99cs £16.99dk	IMMINENT
AMSTRAD	£9.99cs £16.99dk	IMMINENT
PC	£29.99dk	OUT NOW

PREDICTED INTEREST CURVE

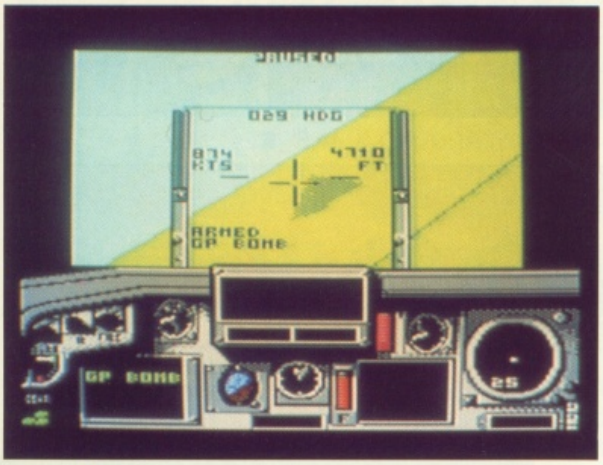


OK you've seen tennis simulations before, and at first sight this one doesn't look like anything special. After a while, however, you are beginning to get used to the controls and starting to really enjoy yourself. You will also be impressed by the attention to detail, and features like the practice options.Although your excitement will begin to wane after you've put in a few hours of play, this will be counterbalanced by your improving technique. You will almost certainly still be playing this one long after other games have been consigned to the dead software pile.

MONEY FOR OLD ROPE

THE GAME AIN'T NEW, BUT THE CONVERSION IS GLEAMING!

C64



Bomber

Activision; £14.99cs; £19.99dk; PC version reviewed in Issue 27; ACE rating 925

Vector Grafix superb flight sim, *Bomber*, emerged on the PC last year to great acclaim. Not only did it include fourteen planes but also boasted incredible solid 3D vector graphics. There was also a variety of features to keep non-specialists happy (such as the out-of-cockpit views) and a mission designer. Although everybody seemed very excited about the program at the time there was a dark thought at the back of a lot of people's minds: This is fine on a 386 PC, but what will the 8-bit versions look and play like?

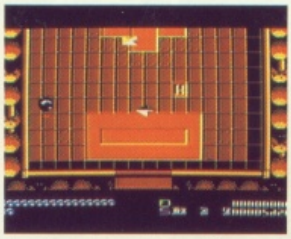
Now that the C64 version has emerged it is time to either allay or confirm those fears. When the thing finally loads you are presented with the usual aircraft selection screen, and at this point things look good. It is only when you get beyond this point that some of the C64's deficiencies begin to show.

The most obvious thing is that many of the options available on the PC version are not available here. Well, that's to be expected because of the memory restrictions. When you actually begin to play, the reduced screen area and slow update speed are also painfully noticeable. However, it would not be fair to decry the program too much - it is still a remarkable achievement, but perhaps a little over ambitious which may give existing C64 flight sims the edge.

ACE RATING: 775

Ballistix

Psyclapse ; £12.99dk, £9.99cs; Amiga version reviewed in Issue 20; ACE Rating 686



Psyclapse computer variation on *Crossfire* is back again, only this time on the C64. The idea behind the game is to repeatedly fire balls at a spherical puck, and knock it into your opponent's goal. You can either play against another person, or on your own, fighting against gravity. All of the elements of the other versions are here, the only difference being the slightly poorer quality of the graphics. The game is fast and furious and provides plenty of short term fun. Not a lot of staying power though.

ACE RATING: 600

Chase HQ

Ocean; £9.99cs; Amiga and Spectrum versions reviewed in Issue 29; ACE Ratings 840 and 868 respectively.

Take a very simple idea for a driving game, add some fast high-quality graphics and lots of sound, stick the whole lot in an arcade cabinet and you've got something approaching *Chase HQ*. The coin-op has done very nicely for itself thank you very much, so it was no surprise at all that Ocean made quick use of their Taito license.

The first two versions of the resulting game were pretty good. Ok so the graphics on the Spectrum (and even the Amiga come to that) don't come anywhere near those of the arcade machine, but the conversions did retain its playability. The C64 version could easily have been the same, but unfortunately the jerky and slow graphics and strident sound don't help matters much. The game is playable enough but it doesn't really compare to the first two versions.

ACE Rating: 700

SPECTRUM

Operation Thunderbolt

Ocean; £9.99cs; Amstrad and Amiga versions reviewed Issue 29; ACE Rating 815 and 927 respectively

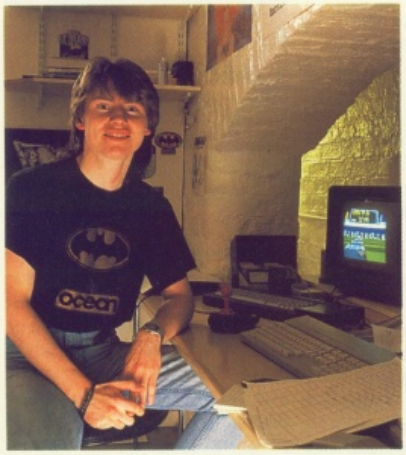
Taito's blood 'n' guts coin-op *Operation Wolf* went down a storm with arcade addicts, who were all able to pop along to their local outfit after a hard days grind and practice killing the boss with an Uzi – very refreshing. Hardly surprising then that being able to do it with a friend in *Operation Thunderbolt* was even better. Even less surprising is Ocean's release of this game after the successful conversion of *Wolf*.

The best thing to say about the Spectrum conversion is that it is very competent and quite a lot of fun. In the end though I found that, as ever, the monochrome graphics began to get in the way of my full enjoyment of the game. When things get frantic it becomes almost impossible to pick individual figures out against the background. It's a shame that it is this totally unavoidable factor which spoils an otherwise superb conversion.

ACE Rating: 725

TRADE SECRETS

A REVOLUTIONARY NEW WAY TO TAME A GAME

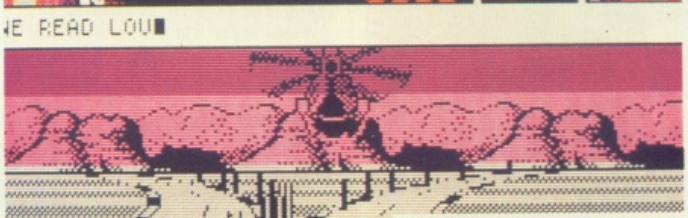


Trade Secrets is an exciting new concept in games hints and tips. In addition to your excellent Tricks'n'Tactics sent in to us, ACE will pick the most popular game released every month, and ask its programmer to reveal all the game's inner secrets. Every game taming ploy will be covered, from complete game maps to hidden cheat modes and bonus levels – told by the person with ultimate knowledge of the game... its creator!

Keep onto your turbo's till you catch up with the criminal's car. Try to hit the car at the side rather than its back. You get 10 times the score and hit points if you turbo and hit the car's side. It normally takes around 20 hit points to take the car out.

CHEAT AT CHASE

What better way to begin Trade Secrets, than with the top selling computer game of Christmas '89? Ocean's Chase HQ racing-sim coin-op conversion was reviewed in ACE 29, where it achieved a 868-rating on the Spectrum. Rik Haynes discovered all Chase HQ's inner secrets by grilling its programmer, John O'Brien...



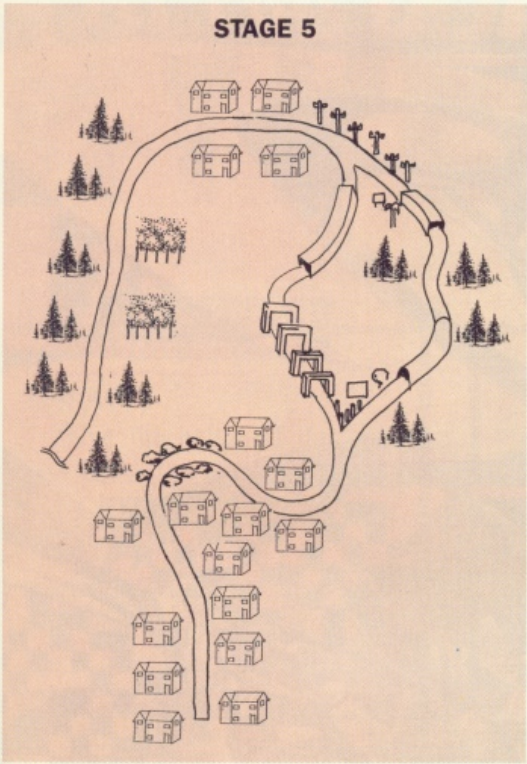
Switch to low gear on the hard turns. The best time to switch to high gear is when you reach 100. The inside lane normally has the faster cars. Power down to low gear before activating your turbo to achieve a fastest speed in the least amount of time.

Take the wrong route to get more points. When chasing a crim's car, activate the Continue Feature as soon as possible, because they keep on moving while the continue counter clicks round.

You can cause more damage by jumping on the criminal's car.

SPECTRUM AND CPC CHEAT

Go into the redefine keys option and press SHOCKED [ENTER]. You should now get a menu selection screen allowing you to view the logo animation, restart a level, move onto the next level, go straight to the end screen, gain an extra credit or enter the hi-score table.



FITTING THE PIECES TOGETHER...

Taking 6 months to develop, the Spectrum version of Chase HQ was written on a ST Mega 2 using Ocean's custom-designed suite of development software, which includes assembler and graphics editor. Although the game's sprite and background graphics were designed on the ST, the loading screen was drawn directly on the Spectrum. A large percentage of O'Brien's programming time was spent writing Chase's complex "Jigsaw" graphics language used extensively in the game, for instance when enlarging graphic objects on the roadscape. O'Brien said, "getting the speed while retaining the graphics in perspective was the hardest thing to achieve – it's shifting a hell of a lot". The sprites were designed by William Harbison on the ST using Ocean's in-house graphics editor. Once the monochrome Spectrum sprite outlines were created, versions for the CPC could be coloured-in. O'Brien's favourite sprite is the helicopter pilot portrait in the control panel, because "it's very stylish and the colours work well". Jonathan Dunn translated four soundtracks from the coin-op with O'Brien supplying an additional 15 sound spot-effects. Five more sound FX were directly digitised from the arcade machine using an Amiga sound sampler – this data was then inserted into O'Brien's ST source code. "This is one of the advantages in using our own 16-bit development system," enthused O'Brien, whose favourite sound effect is the thud of your car hitting the floor after jumping a hill! Unfortunately, the screen-update prevented the use of an in-game soundtrack. Despite this flaw, the screen update runs at a staggering average of 13 frames a second – could Chase HQ be the fastest Spectrum race-game on the market? Irate Speccie programmers can write to ACE at our normal address. O'Brien is most pleased with the flying logos on the game's title screen, "they all run in a single frame". He's less impressed with the game's steering control, "it could have been better if it wasn't for the update rate". In fact, the steering routines were rewritten 10 times during Chase's development. Sadly, a lack of time and spare memory forced O'Brien to ditch plans for hidden bonus and attract sequences in the Spectrum and CPC versions of Chase HQ. These features can be found in the original coin-op and many Japanese console games – these are the types of games O'Brien prefers. When asked why gamesters should buy Chase HQ, O'Brien unashamedly answered, "it could be my last Spectrum game!" O'Brien finished our interview with a tip for any potential game coders or designers wanting to hit the big time: "when you send stuff to software companies, never send anything average – people always remember your worst work rather than your best".

C64 CHEAT

Similar to the ST and Amiga cheat, simultaneously hold down the fire button and type GROWLER. During play you can now reset the time by pressing the T key.

CHASE HQ SPECS 'n' STATS

Version: Spectrum

Run-time Program Size: 320K multi-load

Source Code Size: 640K

Program Breakdown: 20% Code, 79% Visuals, 1% Audio

No. of Levels: 5 stages

No. of Adversaries: 1 criminal + 3 other cars on each level

Max. no. of on-screen Sprites: 50

Average no. of on-screen Sprites: 20

Max. on-screen Sprite Size: "Bloody Big" – the tunnel is the biggest sprite

No. of Sound Effects: 15 + 5 samples

No. of Soundtracks: 4

Max. Soundtrack Length: 90 seconds

Average Screen Update: 13 frames a second

ST AND AMIGA CHEAT

You'll need a friend for this one! Simultaneously hold down the fire button and left mouse button and type GROWLER. When you start the game, just press the T key to reinitialise the timer.

Each car has a different min. or max. speed depending on which lane its in. Car get more and more intelligent as the game progresses – they all twist and turn and some even try to deliberately get in your way. Restrict overtaking to the straights because you get pulled towards the opposing cars on a turn.

Don't worry too much about hitting obstacles – although they incur time penalties some of them just cannot be avoided.

ALL THESE SPECTACULAR HITS IN A SPECIAL PACK! IT'S GOTTA BE...

THE B2

"Believe me this is brilliant, a finely-honed arcade adventure which is the best comic licence ever – you'd be batty to miss it." CRASH SMASH.

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"Here at S.U. we think it's about as close to an ultimate space blast as anyone will ever get. Fab." SINCLAIR USER.

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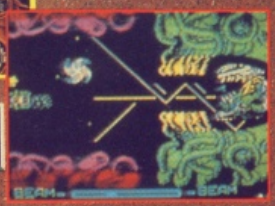
R-TYPE™



"What more could anyone ask for in a shoot-em-up. Operation Wolf, simply is The Business." CRASH SMASH.

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OPERATION WOLF

AA RAVE

CRVG HIT!

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HYPERGUIDE

The most important development in games-playing history is now well and truly underway. It all started with something called 'hypertext'. Here's the full story...

How to use this guide:
Just start with the letter, and follow the links in any order you like...

LETTER

Dear ACE,

What the hell's all this rubbish about **hypermedia**, **CD-I**, and a **'games revolution'** I've never even SEEN a CD-I machine. In fact, people tell me they don't even **exist!** Is this true? Are you just trying to **press my buttons** or what?

Yours sincerely,

Joe Public.

FRAMES

This is another frame. All the boxes in this article are frames. Each frame is given a name, which is usually the same as the **button** that activated it.

PRESS MY BUTTONS

Colloquial phrase meaning 'attempt to induce a sudden state of uncontrolled emotion; e.g. anger, misery'. The term **button** is also used to refer to an element in a hypermedia system.

The joy of Cosmic Osmo is that you don't know where the buttons are. Finding them (and seeing the results of pressing them) adds a delightful dimension of discovery to the game.

LINKED

You just followed a link to this frame. To find out more, check the **Jargon** frame.

You just pressed a button – well, you would have done if this article was implemented on a computer **hypermedia** system. And you got here.

BUTTON

TURN THE PAGE

HYPERMEDIA

Hypermedia is a trendy catchphrase that really took off following the development of so-called hypertext systems. These are simply databases which present information to the reader in a format that allows him/her to browse through the information in the database in an unstructured, intuitive fashion. They work as follows...

Information in the database is stored as a series of **frames**, each of which contains a chunk of text. For example, the letter from Joe Public could be presented on-screen as a frame.

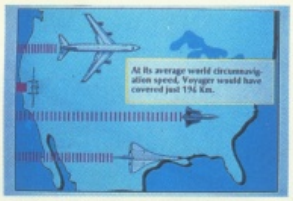
The information in each frame is, however, **linked** to relevant passages of information in other frames. So, for example, if you were constructing a hypertext version of an encyclopaedia, the frame containing the reference for *Xenon II* might mention the Bitmap Brothers, details of whom might be contained in a separate frame. The user could then click his mouse pointer on the words Bitmap Brothers and the system would automatically display the new frame with their details.

In this example, the words Bitmap Brothers would be termed a **button** – clicking on buttons enables you to move from one frame to another along predefined links and the process can be continued indefinitely. For example, the new Bitmap Brothers frame might contain a reference to bitplanes, clicking on which would take you into a whole new area of reference: graphics programming. This movement from frame to frame, exploring the information in the database, is called browsing. Furthermore, each frame need not be limited in size (except by storage capacity, of course), so clicking on a reference to Othello in the frame about Shakespeare might call up a frame containing the text of the entire play. For this reason, CD-ROM, with its vast memory storage, has rapidly become associated with hypertext systems.

In a hypertext system, frames contain only text. However, people soon realised that they could hold other things as well. Given the right hardware, frames could contain sound samples (click on Soul II Soul, hear Jazzie B), graphics, or even other software systems (click on *Xenon II*, play the game). When these other types of data are incorporated, you've moved from hypertext to hypermedia.

To help make things easier, we've broken the links between the frames on this spread and the previous page. If you want to follow your link from a button on page 57, just look for a frame on this spread with the same name as the button.

The Guinness Book of Records is a typical hypermedia package, offering sound, graphics, and simple animation. See page 11 for more details.



EXIST

Yes, this is unfortunately true: at least as far as we were able to ascertain at the time of going to press. None of the major CD-I systems are yet available for public consumption and the development systems in use by software houses are constantly being upgraded.

However, the software systems that will drive the new machines are already being developed using existing technology. This is the importance of games like Cosmic Osmo or *Psychokiller*.

These games may look crude, but they really do represent the beginnings of a games revolution, because the concepts they are developing will later drive hardware capable of making your gamesplaying dreams come true. Yes, it will be worth the wait.

SONY

This company have recently been buying up Hollywood film companies left, right, and centre. Expect to see interactive versions of famous movies in the near future. Soon you'll be able to Come With The Wind, instead of just going with it.

Sony were also collaborators with Philips on the CD-ROM and CD-I standards.

PHILIPS

We covered the Phillips CD-I machine in ACE issue 24. Scheduled for release during the next couple of years, it's promised at under $1000.

CD-I

Make no mistake: CD-I is totally hyper-confusing! In fact, here in the UK if someone claims to know anything about it, you can be pretty sure they don't. Here are the facts...

The laser disk technology that has given us compact disks for music can also be used for computer data. Unfortunately, the WAY in which it is used has evolved in many different directions:

CD-ROM

This simply means any CD that holds data in a read-only form, as defined by the Philips/Sony Yellow Book (see the Jargon frame).

Microsoft, the company dominant in the PC market because of their operating system MS-DOS, are keen to maintain their exalted position in the future by further developing the CD standard. Amongst other things, they recently recruited Greg Riker (who previously headed up Electronic Arts' CD-I development division), so let's hope games considerations aren't entirely absent from their plans.

Microsoft have recently announced three levels of CD-ROM development: CD-ROM, which is really just the basic storage facility; CD-ROM XA, which allows audio and digital signals to be retrieved simultaneously; and CD-ROM XA plus full motion video. The latter uses a special chip that, by compressing/decompressing the data can speed up the transfer rate.

CD-I

Most people know that it stands for Compact Disk Interactive. All this means is that the hardware and operating system of the unit which accepts the CD is capable of taking data off the disk and allowing you to interact with it. In order to do this, however, you have to be able to drag the data off at a considerable speed. It would be no use, for example, if the user wanted to click his mouse button on Mick Jagger's animated lips and hear the vocals of Jumping Jack Flash if the system was so busy animating the lips that it couldn't get the sound data out at the same time.

This problem of data flow is THE big technical bug-bear of ALL CD development. In order to animate a full frame of video, lay over a CD-quality sountrack, AND add in all sorts of clever computer wizardry (sprites, for example, or icons to control the system) you need to shift enormous quantities of data at very high speeds. Finding ways of solving this problem has led to a number of different standards being evolved, and this in turn is responsible for the confusion in the market and the fact that there STILL isn't a CD-I machine to be seen on the shelves in Dixons.

However, the best known standard is that currently being developed by Phillips and Sony. So if someone talks about CD-I, they may be simply using the term loosely, or they may specifically be referring to the Philips/Sony system.

DV-I

In the search for rapid data retrieval, RCA developed a chip set that, when bolted onto a PC equipped with a CD drive, solved the problem. DV-I can not only produce full frame animation, but it can also handle the sound as well, and – very important for us gamesters – it has a superb graphics processor that produces really high-quality compute graphics. You can thus mix pixels with video with ease and great effect, which is essential for many current game styles.

DV-I was recently purchased by Intel. Since Intel, Microsoft, and IBM are all closely linked in the PC market it has been suggested that Microsoft's CD-ROM XA with full motion video is in fact the Microsoft operating system with DV-I bolted on. There has, however, been no confirmation of this.

We thus have three main 'CD-I' systems. The Phillips standard, which is still under development, has yet to offer full-motion video (but will soon), and is now expected in the shops at the end of this year. But then, it was expected in the shops two years ago. The Phillips approach is currently the only one that explicitly promises a unit for use in the home (and therefore for games as well as reference and education). When we will see it is another matter. Furthermore, the graphics processor on the Phillips system is not exactly state-of-the-art, so if you're expecting Amiga-quality sprites to dance across your video background, forget it. Think more in terms of C64/MSX quality there.

Then we have Microsoft's CD-ROM development program. This is currently targetted at the business arena and PC users in particular (though there's no reason why it shouldn't be made available for other machines).

Finally, we have DV-I, which is by far the superior system and which may turn out to be the engine behind CD-ROM XA (the third stage of Microsoft's development, that offers full frame video animation.

It would be lovely if all this confusion sorted itself out in the next twelve months and left us with the best possible system on the shelves at the lowest possible price. But it won't. Remember the battle between Betamax and VHS on video recorders? Betamax was the better standard, but VHS won. As for the time schedule, think five years, and don't expect to see your 1990 Christmas stocking bulging with CD-I goodies.

Fergus McNeill used to design games like The Boggit and Robin of Sherlock using adventure generators. Now he's turned his hand to hypergames: he reckons they're the greatest computer challenge to creativity he's yet encountered. Find out more about hypergames on page 11.

NOW GO TO PAGE 11!

GAMES REVOLUTION

Just why are games like *Herewith the Clues* (see pages 61/62), *Cosmic Osmo*, and ***Psychokiller*** so important?

These games represent the first wave of products developed using hypermedia principles. They may not be much to look at, but that's because the hardware they're running on has limited memory for digitised pics and sound. What's more, the storage medium is usually floppy disk, so there's a horrible pause while each new frame is loaded in and displayed on screen.

Not much to look at, but if you're interested in playing staggering interactive epics with full screen video and CD-quality soundtracks then these products are more significant than any of the most ambitious 3D games currently on the market.

That's because these early hypergames are all using the software systems that will soon be driving even the most powerful CD-I machines. Not only using them, but developing them, refining them, and giving games programmers the experience in working in a completely new way. In five years time, you'll look back on these games and cringe at their primitive appearance, but at the same time you'll know that without them you wouldn't be enjoying that CD-I fantasy you got for Christmas 1995.

JARGON

ACT
In CRL's EGADS system (see page 61), a sequence of frames/actions.

BUTTON
An element within a frame which, when activated (by clicking on it with mouse, for example) calls up another frame.

CD
Compact Disk: a 12cm laser disk as used in standard CD audio systems.

CD-COMMON
A disk format standard that can be read by both Macintosh and IBM machines.

CD-G
Compact Disk and Graphics: an early CD-I standard developed by Warners and offering CD performance with added graphics facilities.

CD-I
Generic term for interactive compact disk technology. Also a standard developed by Phillips/Sony. Offering up to 660 megabytes of storage, eight hours of stereo sound, 32,768 colours for static graphics, 256 for programmed animation.

CD-IV
Infrequent term, referring to CD-I with full motion video capabilities.

CD-ROM
As a generic term: any CD offering read-only storage. More specifically, a standard developed by Microsoft and leading to advanced CD-I potential.

CD-V
Compact disk video: an analog/digital system from Phillips that can play CD-audio and accompany it with a full-motion video signal. Unlikely to have much significance for games.

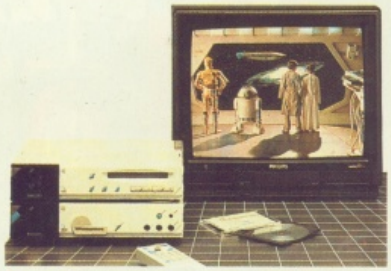
DV-I
Digital video interactive: a chip set developed by RCA and now the property of Intel. Offers full motion video and sound together with graphics manipulation features.

FRAME
In video terms: a single screen image, updated 30 times a second (in NTSC format) and 25 times a second in PAL/SECAM formats.
In hypermedia terms: a single file within a hypersystem that can be displayed on screen and which conventionally contains text/graphics data; however can also be used to contain sound or program code.

GREEN BOOK
The Philips/Sony book of standards for CD-I technology.

HYPERCARD
A simple hypermedia system developed for the Apple Mac, popular with yuppies, and now bundled free with the machine.

INTERACTIVE VIDEO
A system that enables a video program and a computer program to run simultaneously under the control of the user.



The Philips CD-I machine, covered in ACE 24.

IVT
Interactive Video Tape: a hardware system (different versions exist) that turns a VCR into an interactive system by splitting the tape into different tracks and switching between them under computer control. Covered in ACE issue 26.

LINK
The connection between two frames, activated when a button is pressed.

LV-ROM
Laser Video Read Only Memory: an analog/digital system used for the BBC's Domesday Project

RED BOOK
The Phillips/Sony book of standards for CD-Audio technology.

REFLECTIVE OPTICAL VIDEO
Disk technology whereby a laser inscribes shallow pits on a glass master disk. Copies are then pressed in plastic with metal stampers moulded from the glass master. The copies are then covered with reflective aluminium and sandwiched between layers of transparent plastic. Used for most CD applications.

SHOT
Alternative term for a hypermedia frame, used by CRL in their EGADS system (see page 61).

TRON
The Real Time Operating Nucleus: Japan's challenge to CD-I, yet to be seen, evaluated, or – possibly – even produced.

YELLOW BOOK
The Philips/Sony book of standards for CD-ROM technology.

YELLOW GREEN STANDARD
A mixed media CD-ROM format, so-called because of its mixture of techniques from the Yellow Book and the Green Book.

UNRIVALLED

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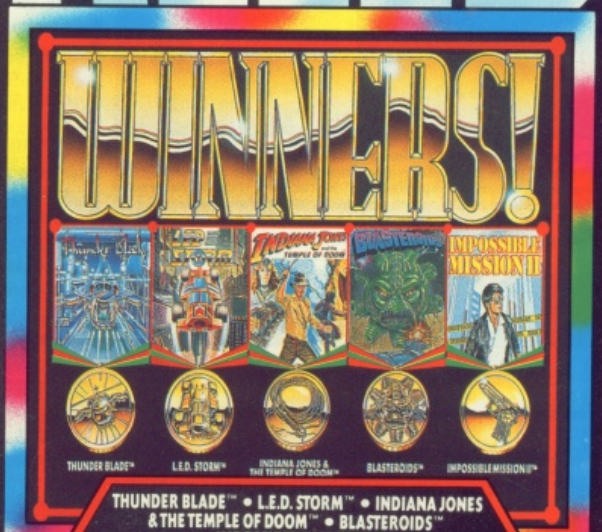

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Follow That Clue!

CRL have come up with Britain's first games-dedicated hypergame generator.

Let's be honest, now. CRL is not one of the country's biggest software houses. Right now, however, its putting together a hypergames system which proves that even the little guys can hyper it up...

THE GAME

Remember Dennis Wheatley? The bloke who sent horrible hairy spiders prancing across the living room in search of innocent female flesh in *The Devil Rides Out*? Although best known for his Duke de Richelieu black magic stories, Wheatley (grandfather of Domark's Dominic Wheatley, just in case you didn't know) was also a prolific author in other areas and one particular oddity he churned out was a sort of D-I-Y murder kit called *Herewith the Clues*.

Produced in collaboration with a Mr Links, *HTC* came in a neat little folder that contained a number of documents, some photographs, some press cuttings, and various 'exhibits' in little bags. The story centres round terrorists in London just before the outbreak of the Second World War. As Assistant Commissioner of the Met, you have received a tip-off regarding the baddies, and when one of them gets killed you have to first identify and locate the gang and then establish a link between each member before finally nailing the guilty party.

When Clement Chambers of CRL spotted this little antique, the first thing that sprang into his mind was that it would make an ideal hypermedia project. It has all the right characteristics (see the article on page 28): lots of visual *and* written data, all linked together and all creating logical 'pathways' for the would-be sleuth to follow with his magnifying glass or, in a hypergame, with his mouse.

The first thing to do, however, was to come up with a software system. As Clem says, hypermedia '...is quite unlike a normal games programming project. With the latter, you get a lot of programmers and graphic artists sweating away for months on state-of-the-art graphics and sound routines...' which are finally shown off to best advantage by a lousy game design. With a hypergame, however, the actual software system is comparatively easy to program: it's the data that's the problem. *HTC* offered all the data on a plate. All that was needed was the 'engine' to drive it.

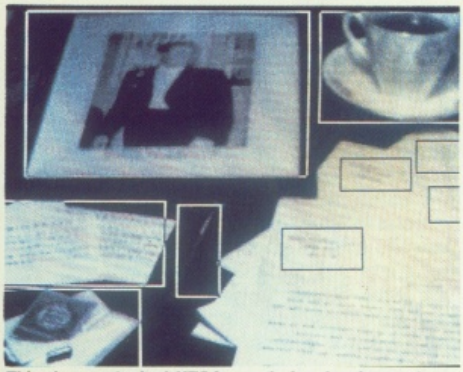
THE SYSTEM

Enter 18-year old John Casey, who in six months produced Britain's first games dedicated hypergame gen-

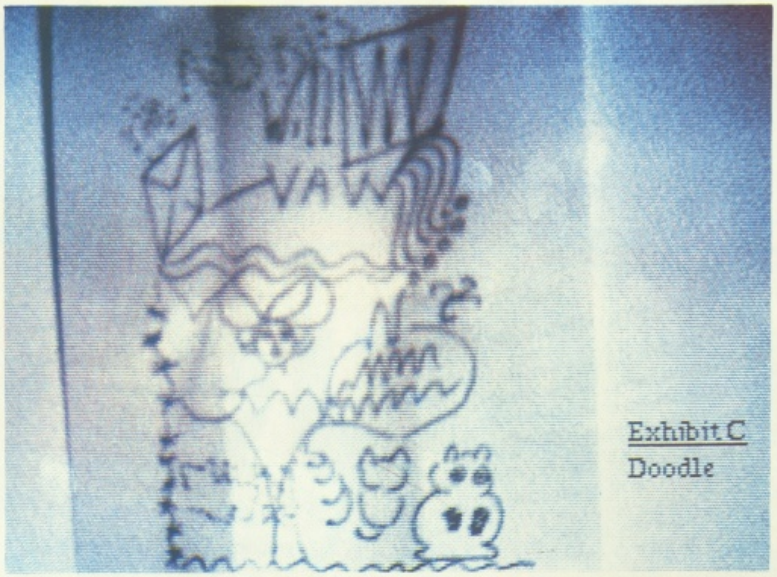
One of the digitised frames in *Way Out West*

Hardy Stuff

The next EGAS game comes from a Laurel and Hardy license and much of the material is drawn from an original Laurel and Hardy black-and-white movie entitled Way Out West. Images for manipulation by EGAS are first grabbed from a video of the movie, then linked together using the system. In addition, designer Michael Hodges is including a new front end, icon control, and animation. This is a development screen with dummy data: the label in the middle of the picture is there to identify the screen at a later stage when the correct graphics are linked in. 'One of the joys of hypermedia,' says Michael, 'is that you can perfect the game design first and then simply in the visual and sound data at the very last minute.'



This shows a typical *HTC* frame during development with EGAS. The rectangles indicate the current location of buttons which, when clicked on by the player, will lead to new frames. Naturally these rectangles are not displayed during play! You can define as many buttons as you want on each frame



One of the frames in *HTC*: take a close look at this man's doodle, check his handwriting, and then correlate this evidence with information in other frames to discover a vital clue. One of the delights of hypergames is the ability to mix all sorts of different cues for the user: visual, audio, and textual

erator. Called EGAS, it allows a non-technical game designer to assemble data in the form of digitised images, text documents, Deluxe Paint files, sound samples and what-have-you and then link them together into an interactive network of exploration and atmospheric experience.

EGAS actually stands for Expert Graphic Adventure System, which might lead you to think that it was something along the lines of Incentive's Graphic Adventure Creator, but in fact nothing could be further from the truth. There is no 'parser' or other adventure software-type feature; instead you have a true hypermedia engine, very similar in many respects to Apple's Hypercard system and quite capable of turning out a game like *Manhole* or *Cosmic Osmo* – but in colour rather than simply in black and white (*Osmo* was monochrome only). It's also much easier to use from the game designer's point of view because it's tailor-made for producing games rather than the jack-of-all-trades nature of Hypercard.

EGAS uses typical hypermedia terminology (see page 28-30). The more normal 'frame' is called a 'shot' by CRL, but the buttons and links are there as usual. The designer is able, using EGAS' control panel, to build up a series of links between screens (see panel on this page) and, by determining the sequences and connections, he/she can construct an entire hypergame universe.

Herewith the Clues comprises 16 exhibits, 11 photographs, 25 frames of character information, and fifty frames of 'relevant documents'. This isn't an enormous amount by Hypergame standards and there isn't any animation involved (the next EGAS game will feature animation – see panel). Furthermore, in keeping with the time period, all digitised images are in slightly out-of-focus black-and-white. On the other hand, there's a lot of scope here for brain-stretching and you're unlikely to finish the game in an afternoon, or possibly even in a month. You'll find yourself backtracking through various screens and following different routes time and time again as you correlate all the evidence and build up your case.

HTC should be available in February or March on the Actual Screenshots label for £19.95 for the ST. Other versions should follow later. Watch out for the ACE review of this first British hypergame in the very near future. Meanwhile, we've only got one gripe: why not make EGAS available on the open market in the same way as the old adventure utilities, *The Quill* and *GAC*, were: that would really challenge the status-quo!

'EGAS was developed because of a desire to have a non-technical game production system. We wanted to free the imagination of designers without subjecting them to technical disciplines: after all, you don't have to build a camera to make a movie.'
Clement Chambers

CRL aren't hogging their system all to themselves: they've given a copy of EGAS to Fergus McNeill, the man who used to use adventure generator The Quill to bring you games like The Boggit and Robin of Sherlock (see page 29). This connection between hypergame generation and the old adventure utilities may not be entirely coincidental: is the hypergame the 1990's replacement for traditional adventuring?

The System

The EGAS control panel as seen by the games designer. The first task is to choose a graphics frame, which can be any IFF file (e.g. a digitised or Deluxe Paint file). Once loaded into the system and labelled, it is displayed on the bottom left of the screen and becomes the current 'shot' or 'frame'.

The designer then uses the mouse to position 'buttons' on the frame. For example, if you wanted the program to display another frame showing a photograph, together with the sound of rustling paper, when the player clicked on the pile of photos in the current frame, you would proceed as follows.

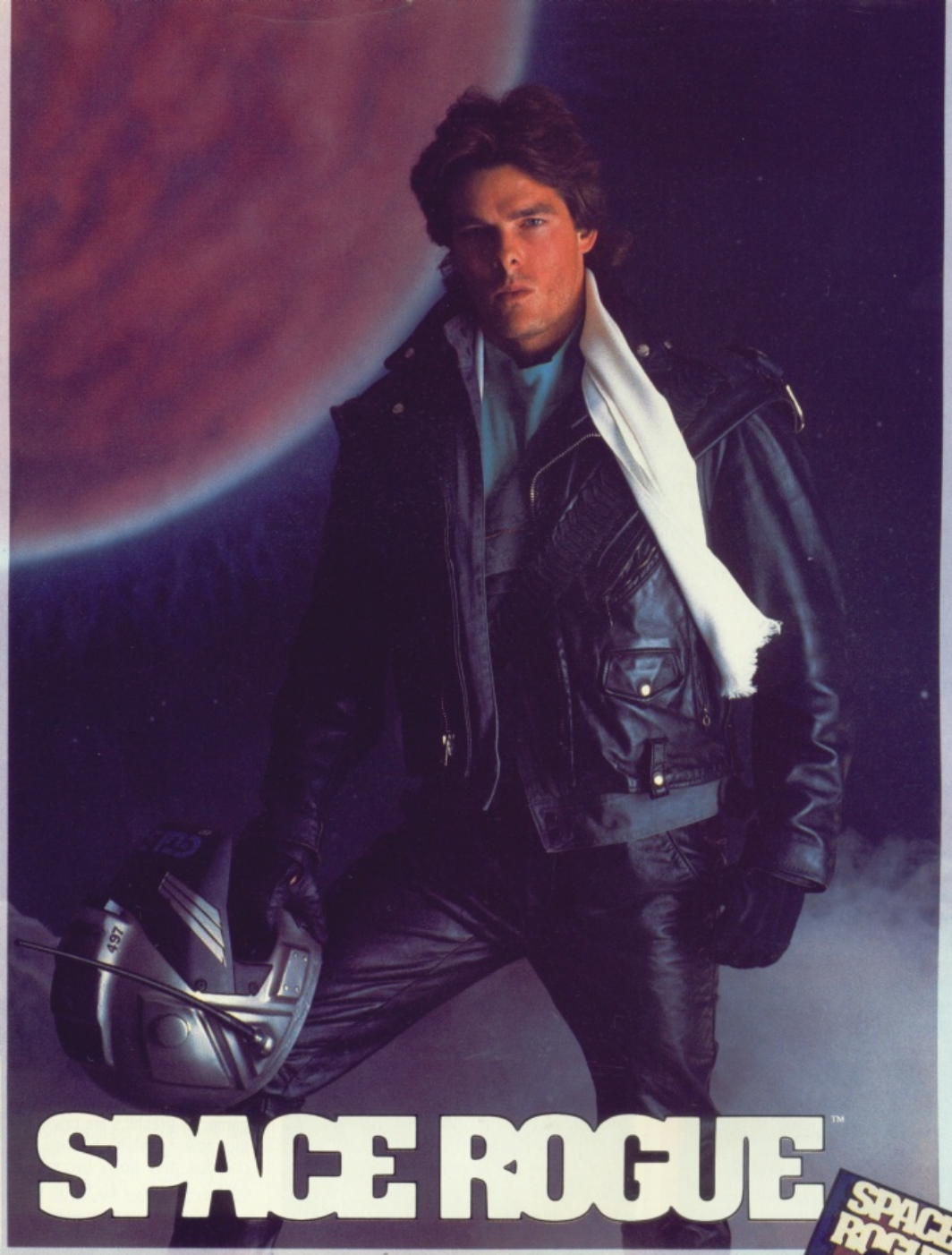
- **Click with mouse on the current frame in the position where you wish the button to be (in this case on the pile of photographs);**
- **locate the two files with the graphics and sound data and log them into the system, telling EGAS what they are called and where they are;**
- **instruct EGAS to establish a link between the current frame and the two new files, to be activated when the button is pressed;**
- **move on to define the next button...**

Other features include a 'time-out' facility, so that if during play the user moves from one frame to another but then takes no action for a specified (variable) amount of time, EGAS will redisplay the previous frame.

You can also, very usefully for games, have randomised buttons which, when pressed, can take the user to any one of a number of frames. The probability of moving to any particular frame can be defined in EGAS by the designer.

EGAS is very memory efficient: a frame takes up about 2K. That, however, does not include the data. As a rough guide, a digitised monochrome picture as seen in Herewith the Clues takes up about 20K.

EGAS allows sound samples up to 130K in length, which is around 12 seconds of good quality sound if sampled at 10Mhz. The sample rate can be varied, of course, so you could have good quality speech samples of around 45 seconds duration: and they can always be linked together in required.



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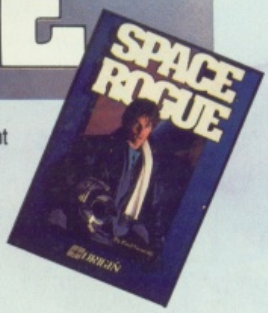

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ACE AT ATEI

RIK HAYNES PLAYS THE SPRING CROP OF UK COIN-OP RELEASES

The Amusement Trades Exhibition International (ATEI) coin-op show at London's Olympia exhibition centre is the UK's premier arcade trade event, showcasing a myriad of new coin-ops, slot-machine and pinball decks, as well as the more traditional leisure gear like go-carts, inflatable castles and shooting galleries.

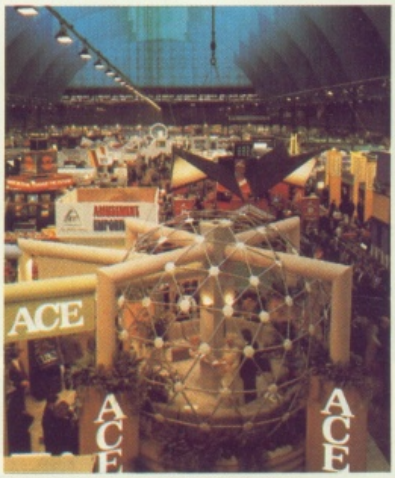
Visitors to the show consisted of middle-aged sales-suits, parties of hassled-looking Japanese, and the obligatory teenage gamesters out for unlimited credit play on the latest coin-op consoles. Quite a few peeps from the computer software biz turned up as well – perhaps they were looking to snap up a licence or trying to get some inspiration from the games on display? They were unlikely to achieve either. The most refreshing aspect of the show's attendees was the large proportion of teenage girls playing coin-ops and enjoying the show – hopefully this finally dismisses the general preconception that arcade games are strictly a male-only leisure pursuit.

LEADING LIGHTS

Konami, one of Japan's major coin-op manufactures, used ATEI to launch three new arcade games in the UK: *Aliens*, *Gradius III* and *Teenage Mutant Ninja Turtles*. Based around the superlative James Cameron movie *Aliens 2*, the first of these games features digitised stills from the film and colourfully gruesome alien creature sprites, as you clean up an alien-infested off-world colony with the help of hip-guns, grenade launchers and flame throwers. The game is a simultaneous two-player multi-stage shoot'em-up which flicks between horizontally- and vertically-scrolling backdrops and static, head-on sections. Its sprites and backdrops are very reminiscent of the film, but the action is a little repetitive despite the approach of multi-stage section-play. Still well worth a look though, especially if you're a fan of the film. By the way, William Gibson – cyberpunk guru and author of the *Neuromancer* sci-fi novel, is currently working on a script for the *Aliens 3* movie.

Gradius III is the latest in the classic *Nemesis* series of shoot'em-ups, featuring all the power ups we've come to know and love – laser, missile and double, to name but a few. It will of course do a storm in the arcades, but its gameplay and visual styles, routed back in '85, are starting to look dated now when compared to the likes of *X-Multiply* and *R-Type II*.

Forget coin-ops, get into go-carts...



ATEI at Olympia: no we didn't have a stand!

Tatio's new bike rscing-sim, WGP, even has twin fans blowing air into your face

Teenage Mutant Ninja Turtles (see ACE 29 for more on Mutant mania) was the best Konami game on stand. It's full of character and charm, as you move from your Teenage Turtle sewer-dwelling to rid the city of villainous scum and save ace reporter April O'Neil from the evil clutches of the Shredder – in a comic simultaneous four-player martial arts beat'em-up. After all, when you live in a sewer and are trained in the art of Ninjitsu by a "radical rat mentor", you don't want to be turned into Turtle soup or wax!

The veteran US coin-op maker, Atari, produced two new titles to an appreciative audience. *Klax* is a 3D-perspective variation on the incredible *Tetris*, calling itself a tic-tac-tile game. Its graphics are bright and colourful, but the now constant barrage of *Tetris*-inspired coin-ops may soon become tiresome – if it hasn't already. Far more exciting was Bad-

Make me an offer I can't refuse

lands, the long and eagerly awaited successor to *Supersprint*. Set fifty years after a nuclear holocaust, *Badlands* is a *Mad Max* road-warrior track race-sim, featuring car customising options and eight tracks including city, desert and oil refinery backdrops.

Atari's Namco subsidiary also had an interesting coin-op on show. *Fourtrax* is a sit-down buggy-bike race simulator incorporating a thrilling new twist – simultaneous head to head competitive play with up to eight people. Many coin-op manufactures are looking into multi-player arcade games at the moment and Namco believes its newly developed hardware used in *Fourtrax* gives the company the jump over its competitors.

BEST OF THE REST

Among the other entertaining coin-op games on stand were Tatsumi's *Round Up 5 Super Delta Force* racing game featuring five-stage *Chase HQ*-style racing in a three-screen sit-down cabinet, Sega's *Op-Wolf*-style *Line of Fire* and Sega's *Shinobi*-like *Shadow Dancer*. Irem's excellent *R-Type II* also made an appearence.

Final Fight from Capcom is a *Double Dragon* style save-the-girlie kick'em-to-death'em-up set in 1990's Metro City, a town not too dissimilar to New York with slum, uptown and bay areas full of familiar-looking skyscrapers and scumbag inhabitants. Nothing original to be found here, but fun nevertheless.

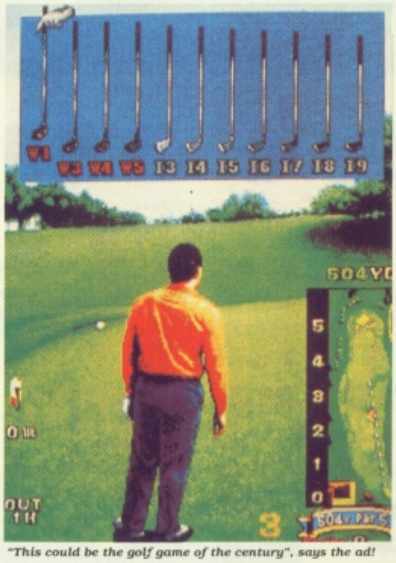
Already out on computer formats and the Sega Megadrive, *Rambo III* finally made his coin-op debut and in the cutie stakes, Tad Corp came out tops with its *Toki* scrollie arcade adventure featuring a lovable monkey-esque hero complete with American Football helmet! Could this possibly be the *New Zealand Story* of 1990?

Tecmo obviously has '90 in mind with its World Cup football game, strangely titled *World Cup '89*! The game looks a bit like Audiogenic's *Emlyn Hughes Soccer* with a side-on 3D view, and plays like *Microprose Soccer*. Unfortunately the player control is slow and jerky. When will Anco's brilliant *Kick-Off* be upgraded to coin-op format?

The most off-beat coin-op at the show was Mitchell's *Pang*. You control a little chap (who looks a bit like the sprite out of Activision's fantastic *Park Patrol* computer game) at the bottom of a static screen trying to avoid a giant red sphere which bounces merrily around the screen. If you shoot the ball, it splinters into two smaller spheres, thus doubling the chance of you getting hit. This continues until the sphere's get too small and they're destroyed with another hit – then its onto another backdrop, only with more speedier blobs and some on-screen obstacles. Weird city or what?

Badlands: Atari's successor to its superlative Super Sprint

Why are these people wearing Addis kitchen tidies? 'Cause they're playing Gaz Inflatables' Laser Starship 'skirmish' game



"This could be the golf game of the century", says the ad!

AND NOW FOR SOMETHING COMPLETELY DIFFERENT

As the amusement industry diversifies away from coin-op/slot machine entertainment, it has started to look back to its roots for inspiration. First there was the renaissance in pinball machines, even culminating in a *Robocop* pinballer – are we talking streetcred? Now another old fave from the distant past, has been resurrected, redesigned and retailed for the 90's fickle leisure tastes: the go-cart!

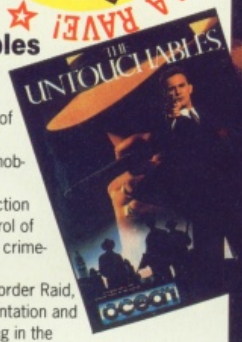
Remember the good old days – the daytrip down to Southend-on-Sea's go-cart track at Peter Pan's amusement park, the stench of burning rotten rubber, the obligatory broken brakes, the older drivers who deliberately slammed into your cart when their parents weren't looking? Well don't get too nostalgic, 'cause all that's changed now as go-carts get cyber and become the latest "in-thing" for corporate leisure weekends. These days, go-carting consists of in-door Le Mans-type organised races, yuppies (or whatever they're called this year), and four-stroke air-cooled 158cc carts capable of speeds in excess of 40mph! I wonder when the updated turbo-nutter coconut shire is due for release...

3D-Tetris courtesy of Atari's Klax

1

AA RAVE!

The Untouchables
from Ocean



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"You will be unable to tear your-self away from the screen even when it's way past midnight"
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from Bladesoft

Laser Squad combines strategic skill with the use of grenades and a variety of automatic weapons to defeat your foe. You can take the part of hunter or hunted - play with a friend and take turns at opposing roles. One player option plays against artificial intelligence so highly develped it bites!

"Laser Squad is a terrific game that is superbly playable and can definately be recommended as one for the library of any gameplayer." **Andy Smith, Amiga Format**

Lazer Squad

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from Ocean

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"Brilliant is the only way to describe Thunderbolt" - not a game for the faint-hearted"
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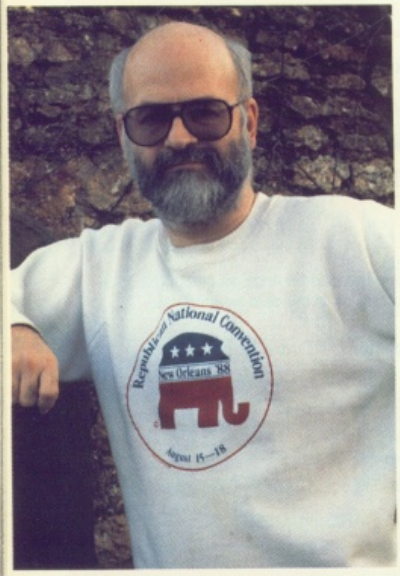
ACE 02/90

The Colour of Pratchett

OK, so what's our excuse for putting Terry Pratchett in the magazine, eh? He's brilliantly funny (well, his books are) and – oh yes – he uses computers to produce his literary gems. Definitely advanced computer entertainment...



Terry Pratchett, Discmaster

Ask anyone in the street about Terry Pratchett and half the people will say 'who?' and the rest will say 'yeah, brilliant, I've read all his books'.[1]

Terry Pratchett grabbed his first slice of cult status with the initial Discworld book, The Colour Of Magic, an introduction to the flat planet called the Disc and its wild magical lifestyle and characters. The colour of magic, as it turns out, is a sort of pinky-green, but the common thread through all the books has always been, not the magic, but a wry sense of humour: jokes that set you up pages before they hit you, coupled with a complete mastery of the 'footnote gag'.

Up to date there have been eight Discworld novels, shortly to be joined by a ninth, Moving Pictures, but nowadays less time is free to actually write as Terry finds himself in demand as a speaker at sci-fi and fantasy conventions, doing signing tours, and answering the phone to people doing their GCSE projects on him.

You get quite a lot of mail now, something like four times as much as you did last year. What do you get besides GCSE students?

'Down the bottom of the pile to get answered are the people that think the way to write to a humorous author you like is to be rude, in what they think is a funny kind of way. Like 'Well, I'm writing to you because I've got nothing better to do with my time'. Okay, bottom of the pile, August 1992 we'll answer that one. The ones you like are the ones who say 'I've never written to an author before', that sort of thing. You get some touching ones, and very nice ones. But the thing is when I'm not messing around with the computer trying to get it to do what I want, I can quite often spend a morning 'doing the office work', which means I'm not writing.'

What did you want to be when you were little?

'An astronomer. I thought it was all looking through telescopes, you see, but in fact what it is, is sitting in a hut in Congleton doing mathematics. My daughter wants to be a Marine Biologist, and she thinks that's all swimming with dolphins. I said to her, it's all sitting in a hut in Congleton doing mathematics. Funny thing is, I met someone who is a Marine Biologist and he told me that's exactly what it consists of.'

You recently collaborated with comicbook writer Neil Gaiman on Good Omens. You both use PC's so do you communicate by bulletin boards?

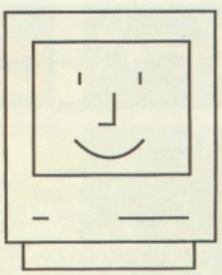
'When we were doing the early drafts we thought we'd be incredibly modern and Jerry Pournelle about it and squirt the stuff down the line to each other. Neil lives in West Sussex, and so we both live in a rural telephone area. We both use Procomm, basically the same modem, and we both had IBMs. We ended up doing it at 300 baud because the mistake rate at 1200 was so high. By the time we kept ringing each other up say, 'are you sure you're on 8N1, because all I'm getting is a row of little faces...' we might as well have yodelled to each other in Morse code and it would have been faster. Anyway, the post is more or less reliable, you might as well just bung a disk in the post.'

Do you tinker with your computer when you're supposed to be working on it?

'I do an awful lot of tinkering, but largely because I'm neurotic about backing up. I've got three machines, large IBM's, upstairs. I back up to all three, simply because I get so nervy about losing stuff. I lost Mort the day after I sent it to the publisher, because I foolishly formatted the hard disk. So they had a final version but I didn't. And when six months work nearly goes up the swanny it makes you a trifle nervous. Tinkering has it's place. You can't sit there and pound out words every waking moment, so bashing your head in frustration against a computer casing is the next best thing to a hobby.'

Where did the original idea for Discworld come from?

'I dunno. Haven't the foggiest idea. No, I know where bits of it come from, that's straightforward Indo-European mythology. The rest of it just evolved. Nowadays, I actually work on ideas for Discworld. I say I'd like to write a Discworld book with Death as the central character, then think about how I'll go about it. With the early ones, though, the stuff just turned up. I think that the Discworld in Guards! Guards! is a much more interesting place than it was in Colour Of Magic, I can do more with it now. It's very gently progressed



'I don't want a smiley face telling me to wait. I want the thing to go bong!'

[1] Obviously the number of yes votes goes up if you stand outside a sci-fi and fantasy bookshop, but the public remains sharply divided into two schools.

from the kind of medieval civilisation which all high fantasy takes place in, to something which is rapidly approaching the Renaissance. This is okay, I think, because you can get more gags out of that.'

You use an Atari Portfolio don't you, for taking notes and even writing on the move? Do you find it reliable enough?

'I've got to have been one of the first people to have got one. There are undoubtedly certain bugs in it. When I first got it, I took it to the World SF Convention in America, and it was great. I had about a thousand words and a spreadsheet on it and then it hung up. Resetting wouldn't work. I tried everything, I even replaced the cells with the ones I got with it, which I now assume were dead, but couldn't get it back. Then when I got home I tried fresh batteries and it came back. I was understandably curious about why I didn't get a Low Battery warning like it says in the manual. So I rung up the Portfolio Helpline. And they say 'Ah yes, it's the Duracells, see? There's this problem. The slope is so sharp the Portfolio has trouble with it.' So essentially what they were telling me was that if I use Duracells, which are the logical choice, I might not get a warning. 'But you supply long-life cells with it', I protested. In the end I thought, what the hell. I made a point after that for not keeping the batteries in for longer than a month. So what's happened now is that, well I got one of the very first ones, and you know what happens to people who get the first ones of any machine?'

They basically bug-test the machine for the manufacturer?

'Right. It would appear that what Atari were telling everyone about the batteries isn't so. It's some kind of bug you get when certain internal files get to a specific size. I have to say that once we got though that bugged stage it's been fine. I did have problems at American customs, but with them looking at the thing because they wanted a GO on it, not trying to take it apart to see if it had a load of bloody Semtex in it! I've been stung mightily for a 64K RAMcard from a shop that seemed to put VAT on twice. But put it this way, if I dropped it and it broke I'd buy another one the same day. It's that useful. Anything bigger than the Portfolio is an item of luggage.'

What's it like to type on?

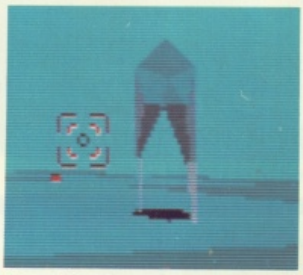
'I can type very fast on it. I did 5000 words in 10 days, which isn't my average, but it's bloody good for spending a lot of time in aeroplanes and at conventions and stuff like that. I was still keeping up a healthy output.'

If you could write anything other than Discworld stuff, what would you do?

'In the early summer Good Omens, by myself and Neil Gaiman, will be coming out, and that's a departure from Discworld. It is fantasy I suppose. I don't know. There is no way I could be a serious novelist. Which is a shame, because I have a rather good forensic horror idea, but I know I can't do it. I did think I should find some guy who can do it and come to some arrangement.'

What's your favourite type of music?

'Jim Steinman, or Jim Steinman or failing that Jim Steinman, quite often. I've got a lot of Jim Steinman and Meatloaf. Kitaro, heard of him? I got Velveteen by Transvision Vamp, which was actually a bit of mistake. The title track was superb, but the rest of the album is pretty so-so. But it's okay.'



'*Starglider*: I've played that till it hurts...'

Discology

The Colour Of Magic
The Light Fantastic
Equal Rites
Mort
Wyrd Sisters
Sourcery
Pyramids
Guards! Guards!
Moving Pictures (out November 90)

Non-Disc Books

Well, there was The Carpet People (written about 20 years ago for kids), then Strata and Dark Side Of The Sun (a pair of early sci-fi books), The Unadulterated Cat (a best selling cat book, like most cat books), The Truckers Trilogy comprising of Truckers (out now), Diggers (out soon) and a third as yet untitled concluding volume (nearly finished) and of course, Good Omens (with Neil Gaiman, out in May).

Do you like computer games?

'I've yet to find a game on the IBM which comes close to a moderately good game on the Amstrad CPC128 we've got. Things like the original *Batman*, I used to sit and play that for hours. *Starglider* on the PC isn't too bad, I suppose, I've played that till it hurts. Oh, and there's a rather nice little game called *Sopwith:* you just chug around trying to avoid enemy aircraft and bomb their installations. The graphics are dreadful, but the gameplay is extremely good. I've seen a lot of Amiga and Atari games where the graphics are good, but I'm not certain how good the gameplay is... I just want to sit there and shoot aliens basically. Oh, *Manic Miner*, on the Amstrad was another one where I got totally addicted. I got through without the extra lives POKE, though!'

What would you like computers to do that they don't currently?

They're not bright enough to anticipate what you want. I don't mind them if they're stupid, what get's up my nose is a veneer of intelligence, but deep abiding stupidity underneath! The first time I looked at an Apple Macintosh, I switched it on and a Mr Smiley face appeared and words to the effect of 'Please wait...'. After about 30 seconds of this I suddenly thought, I don't WANT a big smiley face telling me to wait, I want the thing to go BONG and there you are! I get very annoyed with the difficulties they put in your way. Mind you the thought of actually going back to a typewriter appalls me!'

TENNIS ACE £24.95

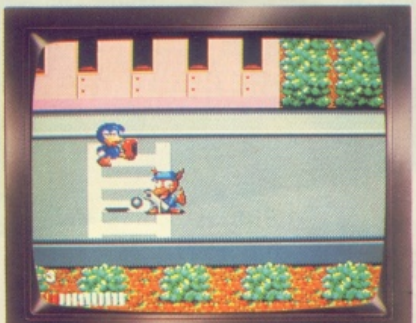
CASINO GAMES £24.95

SCRAMBLE SPIRITS £24.95

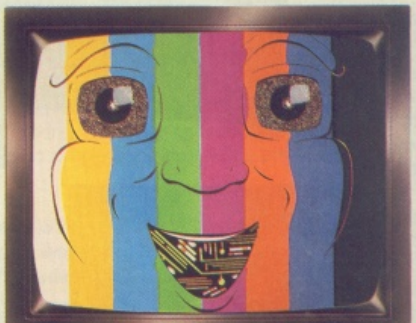
PSYCHO FOX £24.95

BASKETBALL NIGHTMARE £24.95

GOLDEN AXE £29.95



DYNAMITE DUX £24.95



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ACE FLASHBACK!

Tear your hair out, nostalgia freaks: this is the final episode of the great ACE Flashback, covering the entire decade of computer entertainment.

We've had great fun compiling the ACE Flashback, but inevitably we've had to omit some items due to shortage of space. However, we'd be glad to hear from anyone who's got a favourite 'nostalgia item' that's been missed out; just drop us a line at the ACE office, marked ACE Nostalgia, and we'll run as many of them as we can fit in future issues. The address is 30-32 Farringdon Lane, London, EC1R 3AU.

Now, for the last instalment, catch up on 1986-1989; the micro boom is over, but the 16-bit revolution is yet to come!

The ACE Flashback covers the final stretch of the decade, and reveals the Amiga, the PC200, and the console conversion of Ultimate...

1986

ARRIVALS AND DEPARTURES

Launch of the year in the UK was the long-awaited debut of the Commodore Amiga, shown at the Commodore Computer show in May in its original A1000 configuration. Hard to recall that this beast would set you back a cool £1,696.25 at the time, and that Commodore was busy denying its potential as a games machine. Meanwhile the rival 520ST was selling strongly at £800 (with a colour monitor) - Commodore had, in effect, given Atari another year's head start.

The potential of the games console, back in a new and technically advanced form, raised its head with the arrival of the Sega Master System in the autumn. Other new machines were simply variations on a theme: Commodore added an in-built disk drive to the C128 and called it the C128D, and later in the year put the C64 into its now-familiar ivory casing; Amstrad added another 256K RAM and a second disk drive to the PCW; the Spectrum became the Spectrum 128 in February and the redesigned Plus 2 version came out in the autumn (see below); Atari produced a megabyte version of the ST, the 1040ST; Acorn upgraded the BBC standard at long last, bringing out the Master series.

CODE MASTERS

Founded: October 1986

Set up by brothers David and Richard Darling and their father Jim, after a year of writing for Mastertronic. Prior to that David and Richard had written Vic 20 games as Galactic Software while still at school.

Code Masters publishes on the pile 'em high, sell 'em cheap basis, lots of titles, all at impulse buy prices. An extraordinary high profile PR campaign in 1988-89 by West End consultants Lynne Franks put the Darlings on TV and in the national press, making them one of the very few programming 'celebrities'.

First title: *BMX Simulator*

Best ever seller: *BMX Simulator* (all formats)

The Darlings, made media heroes by their PR agency.

EVENTS

● Alan Sugar buying out Sir Clive Sinclair was the sort of event that turns up in spoof predictions - in April 1986 it actually happened. No-one was surprised that Sinclair was being bought out, following the Maxwell debacle the previous year. That it should be Amstrad, whose chairman Alan Sugar had been wont to refer to the Spectrum as a 'pregnant calculator', made it the story of the year.

Amstrad spent £5 million on the Sinclair name, its stock and the rights to its technology. Sinclair Research continued to exist, and Sir Clive, free from the encumbrance of debts and warehouses piled high with Spectrums and QLs, went on to form Cambridge Computer to develop portable computers - the Z88 came out a year later, and Anamartic was founded to further research into wafer scale integration. Amstrad dropped the QL like a stone and took just four months to put together the Plus 2, with its conventional keyboard and integral tape deck.

● The Prestel hackers, Steve Gold and Robert Schifreen, made the news again when their case (see 1985) finally came to trial and the pair were found guilty of forgery. The fines totalled £1,350, the costs a further £2,000. Gold and Schifreen immediately appealed and the case ploughed back into the courts

The Sega Master system is the first console to stand a chance of mass market penetration in the 1990's, thanks to Virgin.

Birth of the Home PC

Just as significant as the Amiga launch in the long term was Amstrad's decision to up-end the stuffy PC market with a range of IBM compatible machines at prices cheaper than much of the software available for them. This was to have serious implications for gamesters: until now, only the US treated the PC as a home computer, but Amstrad's intervention laid the foundation for a similar user base in the UK.

Amstrad did not, however, conduct the low cost clone revolution all on its own. In fact, as component prices continued to fall sharply, the market was wide open for companies such as Spectrum with the Bondwell machines, Opus and Tandy to produce PCs at new low prices: between £600-£1,000.

Amstrad's PC1512s, starting at £469, were even cheaper. In addition, you could pick up a PC1512 from a High Street store such as Dixon's rather than going through a specialist dealer, and Amstrad's high profile in the press ensured that for a while the word Amstrad meant low-cost business computer in much the same way as 'Hoover' means vacuum cleaner. Amstrad's moves to make PCs affordable may have delighted the masses but the company encountered staunch hostility in the corporate market. In a matter of weeks after the launch the word was going round that the PC1512 tended to overheat.

Amstrad acted with characteristic swiftness. Alan Sugar called the rumours 'a pack of lies', apologies were sought (and obtained), and, in October, Amstrad reluctantly installed a cooling fan in the PC1512s, with chairman Alan Sugar making suitably belligerent remarks about the need for the fan in the first place.

● In May, US Gold, software publisher with the Midas touch, slipped up. It had pulled off a coup in acquiring a computer games licence to the 1986 World Cup and all was set fair for a sure-fire number one game when the company discovered it was unable to get an original game based on the World Cup out in time.

Outwardly undaunted, the company went ahead with all the intended packaging - the badges, the score-cards, the posters - and in the absence of a original program included Artic's two year old *World Cup Soccer*. Which perhaps needn't have been a disaster in itself, but *World Cup Carnival* wasn't being billed as a re-release, and at £9.95, it wasn't priced as one.

Trip Hawkins: left Apple and started Electronic Arts.

WHERE ARE THEY NOW?

ULTIMATE SOFTWARE

Once the undisputed masters of Spectrum programming with hits such as *Sabre Wulf*, *Knight Lore* and *Alien 8*. Dropped out of 8-bit programming shortly after being taken on by US Gold at the beginning of 1986.

Leading Ultimate personnel set up a new company, RARE, to develop programs for Nintendo games consoles. Now have no links with the British market.

GAMES OF THE YEAR

Uridium was everyone's idea of the ultimate smooth scrolling shoot 'em up. *Starglider*, with its 3D graphics and fast scrolling, was one of the first games to demonstrate the potential of the 16-bit machines. Access's golf simulation Leaderboard was a firm favourite for its playability.

'If it's the difference between people buying the machine or not, I'll stick a bloody fan in it. And if they say they want bright pink spots on it I'll do that too. What's the use of me banging my head against a brick wall and saying, 'You don't need the damn fan, sunshine'?'

Alan Sugar, after the 1512 overheating controversy in 1986 (quoted in Financial Weekly, October 1, 1987)

1987

ARRIVALS AND DEPARTURES

The launch of the Amiga 500 and A2000 in March gave gamers a straight choice between the A500 and the 520ST as high specification leisure machines. Software houses buckled down to produce titles for the two, although Amiga buyers were often frustrated by publishers' tendency to develop games for the ST and for the Amiga version to be something of an afterthought. But then, at the time, some people were still sceptical about the Amiga 500: it was £100 more expensive than the ST, which by then had been on sale for 18 months.

The Spectrum that everyone had been waiting for, the Plus 3 with a built-in disk drive, duly appeared in May. And, a year after that Amstrad buy-out, we saw the fruits of Sir Clive's labours since then with the Z88, a laptop machine which had started life in another era as Pandora.

Amstrad enhanced its PC series with the launch of the PC1640, and a range of portable machines in the autumn. Atari introduced an up-market version of the ST standard, the Mega STs, and Commodore began its attempt to go back to its business roots with a range of PC compatibles.

All these machines were widely expected and with the possible exception of the Z88 held little surprises. It was left to Acorn, of all people, to provide the year's most sensational launch with the first Archimedes machines.

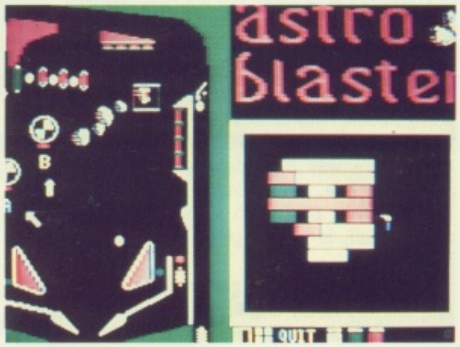
The Archimedes 300 and 400 machines used Acorn's own RISC technology - and were something of a world-first at the price. They ran at a terrifying 4 mips (millions of instructions per second), it could display 256 colours from a palette of 4,096 at a screen resolution of 640x512, and the eight voice digital sound could play in glorious stereo. And just in case it wasn't abundantly clear that here was the ultimate games machine made flesh, David Braben had run up a little number called *Zarch* to demonstrate the Archimedes' mouth-watering capabilities.

The Archimedes as games machine debate still rages. The main problem for the original 300s was that while £1,000 was a startlingly low price for a RISC machine, it was too high for a games micro. Secondly was the problem of support: games programmers were only just getting to grips with the possibilities of the Atari ST, and had scarcely begun to tap the resources of the Amiga's custom chips. That they would all be able to master RISC in their spare time was just too much to ask.

ELECTRONIC ARTS

Founded (US): 1982; (UK): April 1987

Trip Hawkins left his position as director of marketing at Apple Computer to set up Electronic Arts. The company aimed to produce products in the emerging entertainment and creativity market. Alongside games such as *Pinball Construction Set*, *MULE* and *Archon*, the paint, graphics, animation and music Deluxe series has, in its various versions, become a classic. The UK division of Electronic Arts was set up in 1987, publishing European-developed product as well as programs imported from the US.



Pinball Construction Set put Electronic Arts on the map.

First title: *Pinball Construction Set*

Best ever seller: worldwide: *Pinball Construction Set* (all formats); UK: *Populous* (ST, Amiga)

Was Zarch really written in BASIC?
The game was a wonderfully smooth arcade offering which made most ST and Amiga offerings of the time looking suddenly rather silly, and to compound the insult, a rumour immediately hurtled round the industry that Zarch was just a few lines of Archimedes BASIC. It wasn't, of course, but it seemed one of the few adequate ways to explain the power of the Archimedes.

EVENTS

● Viruses hit the news for the first time in November, when Amiga owners were startled by the message 'Something wonderful has happened - your Amiga is alive'. A Virus Killer package was duly programmed and distributed. It all seemed like a nine day wonder..

● Now that PCs, such as Amstrad 1512 and 1640, were going into the home, it became worthwhile for

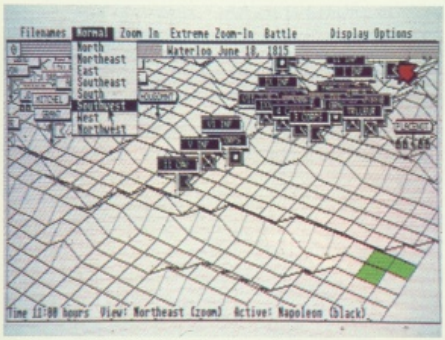
companies to start producing PC games software, or importing from the US, where the PC was outselling the ST and Amiga put together as a home machine. The UK, very slowly, began to catch up.

● In July, Steve Gold and Robert Schifreen, now collectively known as 'The Prestel Hackers', won their appeal against their conviction for forgery after breaking into Prestel mailboxes back in 1985. British Telecom decided to appeal against the appeal, and the case went to the House of Lords.

This saga finally came to an end in 1988, after three years going through the the courts, when the Law Lords ruled that the appeal which quashed Gold and Schifreen's convictions, should stand.

GAMES OF THE YEAR

● *Universal Military Simulator*, from Rainbird, nailed the myth that wargames, however intelligent, had to appear on-screen as though they were progammed on a ZX81.



UMS – changing the face of wargaming.

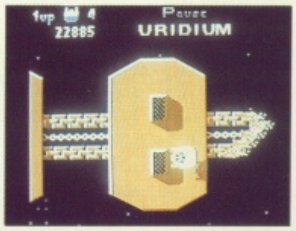
● Incentive's *Driller* proved that Great Leaps Forward were still possible on 8-bit machines.

● *Nebulus*, from Hewson, was a highly original arcade style game, well up to the company's usual standard.

● *Guild of Thieves* established that Magnetic Scrolls' *Pawn* was only the beginning.

'Pan Am takes good care of you. Marks & Spencer loves you. Securicor cares ... at Amstrad: we want your money'.

Well-known Sugarism, quoted in Financial Weekly, October 1 1987, and many others.



Shoot-em-ups have come a long way since Uridium...or have they? Super smooth playability made this Hewson blaster an all-time winner.

'I believe people are smart, not dumb. If you can give people Rolls Royces for the price of Volkswagens, I'm sure they will buy them.'

Jack Tramiel, interviewed at the CeBIT exhibition in Hanover, March 1988 about Atari's manufacturing policy.

1988

ARRIVALS AND DEPARTURES

After the flurries of previous years, 1988 was a quiet one for new machines. The games market looked settled with the Amiga and ST battling it out for the high end market and the Spectrum, Commodore 64 and CPC taking care of 8-bits. The only unknown quantities were the much-predicted return of the consoles - particularly the rather puzzling fact that while Nintendo was flexing its muscles and cleaning up in Japan and the US, it was virtually invisible in the UK - and was there/wasn't there a boom in PC games? Despite the fact that currently (in 1990) software houses are busy producing PC versions left, right, and centre, no-one really seems to know the answer to the last question. Here at ACE we're keen to support PC gamesters, but how many there are out there remains a mystery.

In addressing the last question, Amstrad tripped up for the first time. At the same time as launching a set of PCs designed to give Amstrad its break in the corporate market, it also tacked on a 'home' PC, the Sinclair PC200.

PC 200 TROUBLE

Demonstrated alongside the PC2000s, which had state of the art VGA graphic screens built in as standard, the chunky CGA display on the hapless PC200 showed up its main failing straightaway. Here we had a PC intended to play games (there were four US Gold titles bundled with it) and its graphics were already out of date. On the other hand the use of an integral 3˙ inch disk drive rather than a 5" inch version was ahead of its time.

Altogether it was a most un-Amstrad-like machine. To make matters worse (and even more uncharacteristically), when supplies of the PC200 reached Comet, many were minus manuals, minus leads, minus operating system disks, etc. The Pc200 got off to a bad start and has never really recovered.

EVENTS

● Alan Sugar, chairman and founder of Amstrad, and if you believe the Amstrad image making machine, an East End barrow boy made good, although more reliable talk would have it that the man does possess three science A levels, was awarded an honorary degree by City University, London.

● After seven years in which the price of chips fell consistently, a succession of measures taken in the USA to protect its own semi-conductor industry against the flood of low-cost chips from Japan led to component prices rising and a worldwide shortage of DRAM (dynamic memory) chips. Hardest hit were the low-cost PC clone manufacturers, with their large memory, low profit machines. Amstrad was forced to raise prices a couple of times during the year; Atari took the opportunity to put the ST back to £399 - see below. Only Commodore managed to remain aloof from this pricing see-saw.

● In June Commodore finally brought the price of Amiga down to £399.99, and sales of the machine took off at long last. For the first time the ST and Amiga were selling on equal terms. The ST had been selling at a standalone £299, but on hiking the price up to £399, Atari put the first of its multi-game bundles together, with 20 games in the box as well.

"We want your money..." Alan Sugar.

GAMES OF THE YEAR

● *Robocop*, from Ocean, seemed just like any other film licence at the time. It went straight into the chart at number two at Christmas - few guessed it would still be there a year later.

● Mirrorsoft's *Tetris* was intriguingly developed in the Soviet Union, and proved to be one of the most addictive games of all time.

● *Dungeon Master* took the computerised D&D genre several steps further, while EA's flight/combat sim Interceptor combined solid 3D graphics with hair-raising aerial action.

● *Virus* was the ST and Amiga version of *Zarch*, the game which had wowed everyone at the Archimedes' launch.

1989

ARRIVALS AND DEPARTURES

As far as Commodore and Atari were concerned, business was war. Commodore opened fire by introducing an Air Miles offer with the A500, Atari responded by bundling games like billy-oh with the 520ST; Commodore put together a package around the much-hyped Batman film, Atari bundled yet more games. Commodore announced it had sold 200,000 A500s in the UK, Atari disputed its figures.

Suddenly there were alternatives on offer. The console comeback actually happened - despite itself. Virgin used all the marketing muscle at its disposal to keep the Sega in the public eye, and Nintendo consoles finally began to move off the shelves (though according to ACE reader research, they still account for only a fraction of consoles sold); NEC didn't launch the PC Engine, but people imported them anyway. Nintendo's handheld Gameboys were imported, begged, borrowed and stolen, thanks largely to the inclusion of *Tetris* with the machine.

Acorn caused another stir with its 'low-cost' Archimedes derived machine, the A3000. Much wailing and gnashing of teeth from software house, press and the public - at £1,000 including a monitor, it's still not cheap enough. But Acorn made some efforts to woo the mainstream software publishers and at the end of the year, the jury is still out regarding the A3000's future.

EVENTS

● The virus problem became acute, though this was partly due to the surrounding hype. Publicity encouraged some programmers to devise their own viruses; fear of infection led some people to attribute any glitch, crash, or bug to a virus. The virus detectors - programs and people - had a field day.

Many so-called viruses, such as the Friday 13th program, appeared to be more the product of hype than a concrete threat. The full effects of the 'Aids' virus, which claims to be waiting to wipe hard disks, have yet to be seen.

● The Konix Multi-System burst into the limelight at the Toy Fair in January with a prototype console and its imaginative 'add-on', the hydraulic chair. The press and software publishers were captivated and eulogistic articles appeared. Konix went back to its headquarters high above Ebbw Vale and prepared for the Multi-System's grand launch at the PC show in September.

In the event, the 'grand launch' turned into a nightmare of embarrassment, as the system failed to turn up until a couple of pre-production machines stuttered into action on the last two days. The chair was still a prototype.

Meanwhile the media remained relatively quiet, unwilling to broadcast the open secret that Konix had run out of money to bring the Multi-System into production, just in case adverse publicity caused the whole house of cards to collapes. The problem appeared to be alleviated in October when distributor Add-Ons took a stake in the company. The Konix saga continues into the 1990s.

● Another machine for which much was promised and which nearly didn't make it in the 80s was the Sam Coupe, a Spectrum-compatible games machine with sophisticated graphics and sound capabilities developed by Miles Gordon Technology. Like the Konix, Sam also suffered delays before an initial production run of just over 800 units slipped out in December.

● Hacking should have been one of 1989's big stories. In the end it proved a non-event. Tory MP Emma Nicholson gained a lot of publicity for her Private Members Bill, but withdrew it when it was apparent there would be no time to discuss it in the Commons. The Law Commission published a report recommending a maximum punishment of five years in prison for people convicted of altering computer data having gained unauthorised access to a system, but no anti-hacking bill was included in the Government's legislative programme.

● Electronic Arts introduced 16-bit budget titles with back catalogue releases at £19.99; then US Gold after the success of its 8-bit budget label Kixx, set up Klassix, also at £9.99. But who else but Mastertronic should decide that this was far too much and at the end of the year launch at range of 16-bit games for £4.99?

MICROPROSE

Founded (US): 1982; (UK): 1986

Major 'Wild' Bill Stealey, management consultant and ex-US Air Force, and Sid Meier, programmer with General Instruments, founded Microprose to develop flight simulation programs with an eye to detail and authenticity.

Was part of the US Gold stable until the end of 1986, when Microprose set up in the UK. Enjoyed success with *Gunship*, *Silent Service* etc, but underwent huge upheavals in 1989 with the acquisition of the BT Telecomsoft conglomerate and the departure of UK MD Stewart Bell and affiliate label Origin shortly afterwards. Now have 55 staff in UK.

First title: *Hellcat Ace*

Best ever seller: *Gunship* (all versions)

GAMES OF THE YEAR

● *Populous* appealed to the megalomaniac in everyone as you played God with your people and lands. Meticulous programming and eerie sound effects gave weight to this original effort.

● Hardly original, but winnning all the plaudits for 16-bit playability was Anco's *Kick Off*, with its smooth, fast, football action.

● Flight simulators have traditionally been of a consistently high standard, but Mirrorsoft's *Falcon* showed there was still plenty to learn.

AMSTRAD IN TROUBLE

Meanwhile the seemingly invincible Amstrad was having a nightmare of a year. 1988 had seemed bad, with high DRAM prices eating into profits, but 1989 beat it into a cocked hat. First slice of bad news was a hangover form the previous year: the announcment that for the first time since going public, profits had fallen. Then, as the company struggled to get the PC2000s into the shops, extra parts had to be supplied for the potentially faulty hard disk controller in the PC2086, and just a few weeks later, a bug surfaced in MS-DOS 4, the operating system bundled with the PC2000s.

Worse was to come. In July Amstrad announced it would swap all the hard disks in the PC2286 and 2386 after the controller continued to throw up problems. Come October, and the City's worst fears were confirmed as profits collapsed - £76 million sounds a lot, but this is compared to £160 million the previous year - and Amstrad admitted it had £300 million worth of stock in its warehouses.

Super Mario Land may not look much on the Gameboy, but it plays as well as its bigger brothers on the Nintendo colour console.

SAYINGS OF THE YEAR

'Like your Aunt Ethel it never seems to go away'

Commodore on the C64. (New Computer Express, 14.1.89)

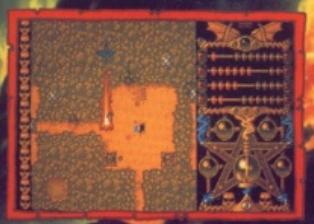
'A dramatic gesture is now needed to overcome any suggestion that this company is failing in its duty to supply reliable products.'

'The 'dramatic gesture' was the exchange of all hard disks on its PC2286 and 2386 machines. (Amstrad company statement, issued July 1989)

The A3000: cheap(er) RISC power from Acorn.

Rumour has it that Amstrad offered millions for the Konix chair and that Konix turned them down.

DRAGONS BREATH



Immortality. Legend has it that the secret is hidden in the Throne Room of the Great Castle atop Dwarf Mountain at the centre of the land of Anrea.

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Dragons Breath. A Fantasy Strategy game for up to three people.

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Tower of Babel is an intricate 3D strategy game involving an interconnecting network of towers, platforms and lifts all rendered in solid 3D with innovative light and shading techniques. Take control of robot spiders and program them to solve problems and puzzles and interact with other creatures, such as Pushers, Zappers and Grabbers. Alternatively, real time control is available to you at any time for instantaneous reaction to the game's developments. For the more adventurous among you, there is a complete game designer, allowing the construction of your own series of towers, platforms and lifts. Attempt to fox your friends with your own fiendishly difficult creations. More than just a game, more than just a puzzle – Tower of Babel is a whole new concept in strategy gaming.

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RAINBIRD

TRICKS 'N' TACTICS

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The Ultimate *DUNGEON MASTER* Guide

Part Two

ITEMS TO BE FOUND BEHIND THE TURQUOISE DOORS ON LEVEL 7

Door 1 – Gem of Ages; Sceptre of Life; Illumuley
Door 2 – Dragon spit; A pair of Boots of Speed
Door 3 – Crown of Nerra; Magic Box
Door 4 – Flamebain; Bolt Blade

KEYS

There are many keys that must be found to pass through the levels, the most notable of which are these:
RA Keys – These are found on levels 3, 7, 9, & 12. These keys open doors within level 7.
Master Key – Found on level 12. Opens a door on level 7.
Ruby Key – Found on level 11. Opens a door on level 7.
Winged Key – Found on level 7. Allows access to Dragon Level (14).

CLOTHING

There is a vast amount of clothing to be found on all levels. Your characters should be fully dressed in the 'toughest' items as they are found. Most important is the armour which should be worn by your front two characters (fighters). The most useful worn items are listed below:
Armour of Darc – Found on level 12. Makes you harder to see.
Armour of Lyte – Found on levels 10, 11, & 12. lighter in weight.
Flamebain – +12 to Anti-fire.
Leg Mail, Leg Plate, Mithral Aketon, Mithral Mail, Basenett, Helmet – these items are found throughout the dungeon.

It is advisable not to wear the armour - dropped by Chaos Knights, as it is cursed.

SHIELDS

Shields are numerous and important for protection. They should, where possible, be carried at all times.
Buckler
Small Shield
Wooden Shield (dropped by skeletons when they die)
Large Shield
SHield of Darc
Shield of Lyte

EXPERIENCE LEVELS

As you pass through the levels you gain experience in the four disciplines: *Wizard*; *Ninja*; *Fighter*; and *Priest*. Your level of expertise increases in the following order:
Neophyte
Novice
Apprentice
Journeyman
Craftsman
Artisan
Adept
Expert
Master
LO Master
UM Master
ON Master
EE Master
PAL Master
MON Master
ARCH Master

CHARACTERS AVAILABLE AT THE START OF THE GAME

NAME	SKILLS	HLTH	STAM	MANA	ITEMS
ALEX	App.NINJA Nov.WIZARD	50	57	13	Sling
AZIZI	Nov.FIGHTER App.NINJA	61	77	7	Hide Shield 2 Daggers
BORIS	Nov.NINJA App.WIZARD	35	65	28	Rabbit's Foot
CHANI	Nov.FIGHTER App.WIZARD	47	67	20	Moonstone
DAROO	App.FIGHTER Neo.WIZARD	100	65	6	
ELIJA	Nov.FIGHTER App.PRIEST	60	58	22	Magic Box
GANDO	App.NINJA Nov.WIZARD	39	63	26	2 Poison Darts
GOTHMOG	Jny.WIZARD	60	55	18	Cloak of Night
HALK	Jny.FIGHTER	90	75	0	Helmet Wooden Club
HAWK	Nov.FIGHTER App.PRIEST	70	85	10	2 Arrows
HISSA	App.FIGHTER Nov.NINJA	80	61	5	
IAIDO	App.FIGHTER Nov.PRIEST	48	65	11	Samurai Sword
LEIF	App.FIGHTER Nov.PRIEST	75	70	7	
LEYLA	Jny.NINJA	48	60	3	Rope
LINFLAS	App.FIGHTER Nov.WIZARD	65	50	12	Bow
MOPHUS	Jny.PRIEST	55	55	19	3 Foods
NABI	App.PRIEST Nov.WIZARD	55	65	15	Staff
SONJA	Jny.FIGHTER	65	70	2	Sword Choker
STAMM	Jny.FIGHTER	75	80	0	Axe
SYRA	Nov.PRIEST App.WIZARD	53	72	15	Apple
TIGGY	Nov.NINJA App.WIZARD	25	45	36	Wand
WUTSE	Nov.NINJA App.PRIEST	45	47	20	3 Throwing Stars
WUUF	App.NINJA App.PRIEST	40	50	30	Empty Flask
ZED	Nov.FIGHTER Nov.NINJA Nov.PRIEST Nov.WIZARD	60	60	10	Torch

SPELLS

Power:
LO UM ON EE PAL MON
Elemental Influence:
YA VI OH FUL DES ZO
Form:
VEN EW KATH IR BRO GOR
Alignment:
KU ROS DAIN NETA RA SAR

POTIONS

VI	Health
YA	Stamina
VI BRO	Poison Cure
YA BRO	Magical Shield
DES VEN	Poison Potion
YA BRO DAIN	Wisdom
YA BRO NETA	Vitality
OH BRO ROS	Dexterity
FUL BRO KU	Strength
ZO BRO RA	Mana

The character creating these potions must have an empty flask in hand.

SPELLS

FUL	Magical Torch
YAR IR	Magical shield (Group)
ZO	Opens Some Doors
DES VEN	Poison Spell
OH VEN	Cloud of Poison
DES EW	Anti-Ghost Spell (All non-material beings)
YA BRO ROS	Magical Footprints
OH KATH RA	Lightning Bolt
FUL IR	Fireball
FUL BRO NETA	Fireshield
OH EW RA	Magic Vision
OH EW SAR	Invisibility
OH IR RA	Create Light
DES IR SAR	Create Darkness
ZO CATH RA	Create Plasma (to free power gem)

BEASTS OF THE DUNGEON

There are many different creatures to meet in your journey. It is not always necessary to fight them all, many can be run around, lured into rooms and shut in, or simply run away from.

All creatures are unique in that they all have their own achilles heels and respond to you differently, some can be driven away while others are unrelenting in their pursuit and ferocity. The following is a complete list of creatures plus information to help you overcome them.

Mummies: The first monsters to be encountered. Easy to kill on all levels. Fight, range weapons to kill. Found on levels 2, 3 & 8.

Screamers: Easy to kill. Fight, throw items, range weapons. Due to the small damage they do to you and their slow pursuit, these creatures are ideal to practice all combat skills on. One room towards the end of level 4 regenerates them, an ideal place to practice. They can also be eaten. First found on level 2.

Blue Ogres: These creatures use wooden clubs and can cause serious damage to your party early on. Relatively easy to kill, not too fast in their pursuit of you. First found on level 3.

Rock Monsters: Hard to kill and poison you when they strike. Very slow moving and thus ideal for in/out attacks, also use fireball. You can drop them into pits (useful in 'The Room of the Gem'). Found first on level 3.

Ghosts: Fairly swift in their pursuit and can pass through closed doors. Use disrupt, dispell, DES EW, or vorpal blade. Found first on level 4.

Pink Worms: Ferocious creatures that will do considerable damage and poison you. I favour fireballs, range weapons and rear attacks. keep poison cures handy. found only on level 4.

Giant Wasps: These are amongst the fastest creatures you will meet. Don't bother with in/out attacks. Quite easy to kill, try to get off a fireball before they reach you. If forced to fight head to head, have poison cures handy. Found first on level 4.

Green tentacle monsters: These strange looking creatures are fairly easy to kill and slow in their pursuit. They throw lumps of poison at you. Fireballs and range weapons are advised. Found first on level 5.

Flying snakes: Quick moving and fierce, these creatures inflict serious damage and poison your party. Not hard to kill, fight and fireball. Found first on level 5.

Pixies: Most annoying creatures, they do no damage, but steal whatever you have in your left hand. A fireball, or if you are quick enough, a swift blow should do away with them. They giggle just before they steal from you. out of interest, if you are asleep and any creatures attack you, you automatically awake – not so with pixies.

Giant Rats: Quite resilient these beasts. They often attack in pairs doing considerable damage. In/Out attacks are advised, also range weapons, fireballs and lightning bolts. First found on level 9.

Beholders: Large tentacled eyeballs that float above the ground. Be careful of In/Out attacks as they throw magic over some distance. I prefer range weapons and magic. Worth bearing in mind is that they are the only creatures able to open doors and gates.

Mini Dinosaurs: Very few of these will be encountered. Although slow they take a lot of hits and deliver a fare blow with their tails. Fireballs and In/Out attacks reap their rewards. Found first on level 9.

Small Sorcerers: Not many to be found. They throw powerful magic at you but are quite easy to kill with magic and fighting. Beware! When attacked they often transport a short distance, perhaps to your side, and hit you before you realise. Good Policy – if they transport, turn on the spot quickly to look for them. Found first on level 9.

Golden Scorpions: Very resilient beasts, requiring a lot of fireballs and In/Out hacking. Beware of that poisonous tail, they move fairly quickly when in pursuit. Found first on level 10.

Insubstantial Triffid: A non-material creature that fades in and out of vision. While solid, a fireball can be used but dispell, disrupt, DES EW, and vorpal blade are preferred. they throw powerful magic at you. Found first on level 12.

Giant Spiders: Although large, no great problem. A nasty bite but In/Out hacking and magic do the job. The morningstar weapon is quite effective. Found first on level 12.

Chaos Knights: Another hard one to kill. Often attack in pairs doing a lot of damage to you. Fireballs are favoured along with dropping down pits where available. Don't wear the armour, it is supposed to be cursed. Found first on level 12.

Water Elementals: Pools of water that follow you, rearing up and doing damage. cast a calm spell (from wand) and in with the vorpal blade, DES EW, disrupt and dispell. a few swift blows on the horn of fear will cause them to retreat making attack easy. Note! They can pursue through closed doors by flowing underneath. Found first on level 11.

Fire Elementals: Non-material, non-moving creature. DES EW, disrupt, dispell, vorpal blade. Some regenerate after a short while. Found first on level 13.

Stone Golem: Only 5 of these exist, all on level 11 guarding the Tomb of the Firestaff. Very hard to destroy, taking many fireballs to get rid of. They drop a stone club which is too heavy to be of any use.

Devils: Found only on level 13 guarding Lord Chaos. they throw powerful fireballs and head to head combat is not advised. Cast fireballs at them from a distance.

Dragon: Average in its speed but unrivalled in its ferocity. Only one fireball is required to kill you. Chase him round the pillar on level 14 attacking his rear with many hits and much magic.

Lord Chaos: The man himself!! All conventional attacks are useless, you must first enclose him in a flux cage and fuse him with the Firestaff. Many attempts may be required to kill him as he has the habit of transporting away throwing powerful magic.

False Grey Lord: If you retrieve the Firestaff and attempt to leave the dungeon you will meet this person. see what he does, but be advised, you won't like it.

SOME COMBAT TIPS TO HELP YOU GET THROUGH ALIVE

In most cases head to head combat is not advised, preferred is the In/Out attack as most creatures allow you to get in the first blow.

Trapping creatures under gates is very effective because it damages them along with your fighting.

Magic Freeze Boxes and the Eye of Time should be put to good use, sometimes to escape, but better used when a creature is under a gate. This is very effective against the more resilient beasts (knights, scorpions, spiders, stone golems etc.).

Dropping creatures down pits is effective, but doesn't always kill them and they may step into a transporter, reappearing at a most inconvenient time and bad place. Try to weaken them first before dropping.

Always have VI potions on hand for instant curing along with VI BRO (Anti Poison) potions when fighting venomous beasts.

Beware of retreating into dead ends. Even leaping into a pit may be more acceptable than fighting overwhelming odds, it gives you time to recuperate.

Frequent saving is advised, especially after a big fight or solving a lengthy problem to save you having to re-do too much if you die.

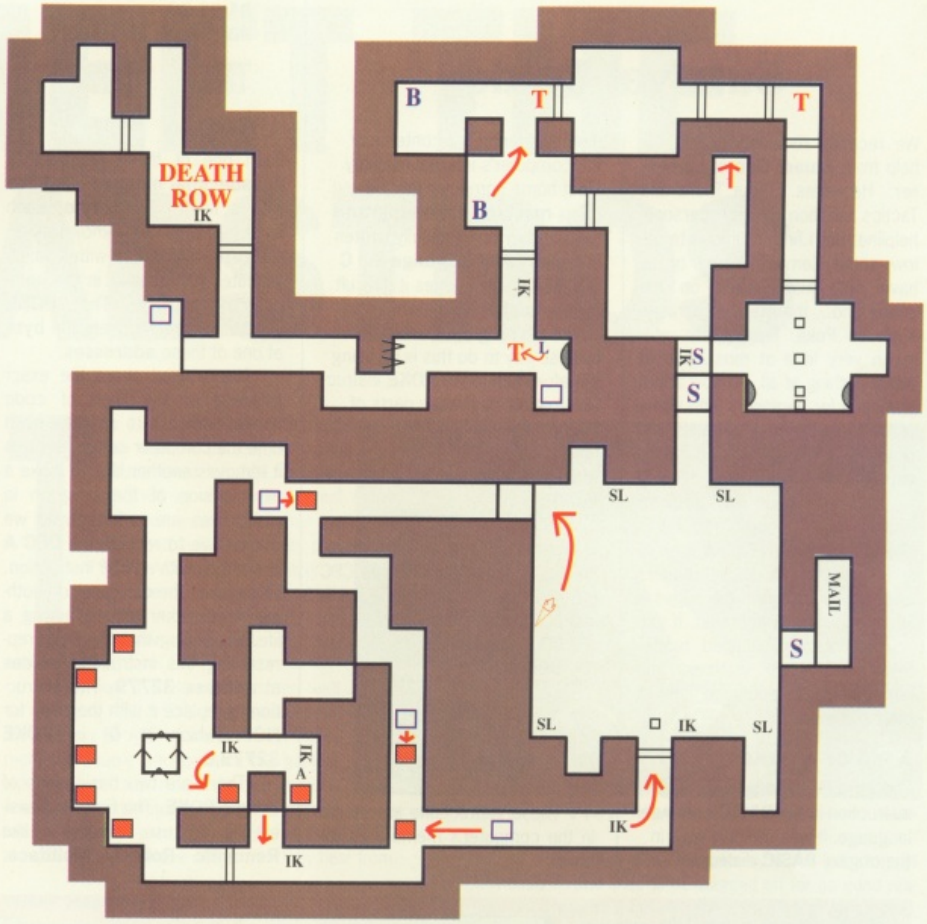
OK that's all for this month. In the next instalment we have a guide to the first eight levels of the game.

NOT SO CHAOTIC CHAOS!

Would you believe it? There I am telling you that *Chaos Strikes Back* is the hardest thing since the Star of India and I've already heard from two people who have completed it. One of them is **Ian Urquhart** of **London** who has supplied a map of the first part of level 1 in order to get you going.

KEY

L	=	Lever
T	=	Teleport/Twister
B	=	Button
Sl	=	Slot
■	=	Pad
■	=	Pit
A	=	Alcove
F	=	Fountain



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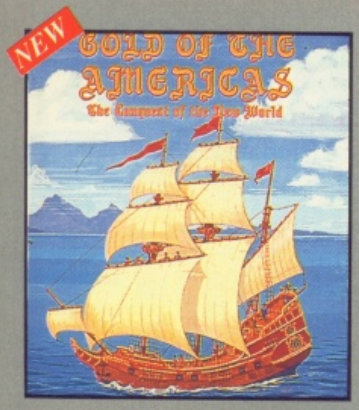

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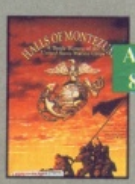

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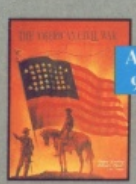

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A TNT Survival Guide

We recently received a plea for help from **Stuart Doe** of **Leicester**. He writes '...your Tricks and Tactics section is my personal helpline, but I find it difficult to follow some items.... some of us have only just arrived on the scene and... the maze of phrases such as Poke, Bytes, Bits, etc. mean very little at most, and at worst nothing at all. So how about a section for beginners with some of the more common phrases and practices being listed and explained?'

This is quite a frequent request so we thought that it was about time that **TNT** gave a bit of a helping hand to those readers who occasionally find the pages a little difficult to understand. If you are a more experienced reader then please bear with us, and remember that everyone has to start somewhere.

A PIG OF A POKE

The word **POKE** originated as an instruction in the **BASIC** computer language. It was the only way, in the original **BASIC** dialect, of directly altering the contents of the computer's internal memory. Most home computer games end up as **machine code programs** (even if they are originally written in a **high-level language** like **C** or **BASIC**). This makes it difficult for the **hacker** to customise or adjust the program code. The easiest way to do this is by using the aforementioned **POKE** instruction to directly change parts of the program that perform specific functions (such as removing a life when you crash your mega-blaster mk.V)

As an example, in a game written in **Z80 machine code**, for the Spectrum or Amstrad CPC for instance, there might be some instructions such as:

```
LD A,(LIVES)
DEC A
.
.
.
LD (LIVES),A
```

These instructions are stored in the computer's memory as follows:

```
3A 00 80
3D
.
.
.
32 00 80
```

Each one of these numbers (a **hexadecimal number** - in **base 16**) is known as a **byte**. Each **byte** has a number, known as an **address**, associated with it which indicates it's location in the computer's memory. The **POKE** instruction directly alters the **byte** at one of these **addresses**.

Never mind about the exact meaning of the lines of code above, suffice it to say that each time the computer comes to them it removes another life. To make a new version of the program in which lives are not removed we would have to replace the **DEC A** instruction with a **NOP** instruction. This makes the computer do nothing at all rather than removing a life. Supposing that the **byte** representing this instruction resides at **address 32779**. The instruction to replace it with the code for **NOP** (which is **0**) is **POKE 32779,0**.

There are two basic ways of using a **POKE**. The first, and easiest is to use a device like **Romantic Robot's Multiface**. This is a hardware device that plugs into your computer's expansion port and allows you to pause the program that is running and directly alter sections of the program. Because of the ease with which this is done, I recommend that beginners who can afford to do so buy one of these.

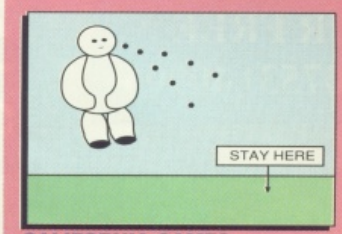
If you do not have a device of this nature you must load the program code in such a way that the game does not run automatically, then make the necessary alterations, and finally start the game running manually. The methods of doing this vary from machine to machine. Over the next couple of months I will be showing you techniques for some of the popular machines as well as providing some more in-depth info on the contents of these pages.

I hope that has enlightened Stuart and others a little. One thing Stuart does say in his letter is 'please don't tell me to read a book as this only confuses me more'. Well, point taken, but I do recommend that you buy something like **The Penguin Dictionary of Computers**, which provides reasonably comprehensive definitions of the terms used here and in other publications.MORE SEGA SENSATIONS

Here are a few little pick-me-ups for ailing Sega Master System owners from Andrew Harden of Essex.

TIME SOLDIERS

On the last battle keep to the right of the screen when scrolling up. When you reach the final bloke quickly run to the right and up so you are to the side of it. Now fire continuously at its face, but watch out as it fires two red bullets every eight seconds. When it does move up then back down. Oh yeah, the second to last boss spits balls so stay at the bottom of the screen. When he goes to the top turn and fire then repeat this (see diagram). I think this game has the most unrewarding end screen of all time. It just says: 'CONGRATULATIONS!'.



CALIFORNIA GAMES

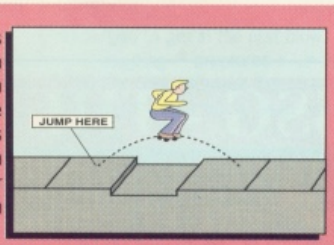
To get 26000 or more on every go on the half pipe, do this:
1) Don't fall off!
2) Just do hand plants
3) Keep finger on button 2 to do

handplants. the longer you hold the button, the higher you score.
4) Between handplants push down if going up and up if going down.

In the footbag event variety is the best way to gain points, so do different moves, not the same move all the time.

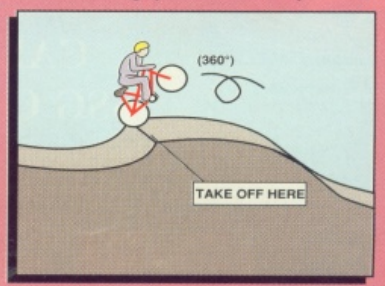
As soon as the surfing event starts push both buttons – this slows the board down. Push top the right (as per usual). do this until the wave is just over the board and then let go of the buttons. Keep turning the board up and down to gain speed in order to get out of the wave. Now do five normal jumps (45°) and three or more straight up jumps. Now turn the board through 360° about two or more times using buttons 2 and 1. I know this sound like a lot to do, but with practice it can be done. If you do what I've suggested you can score 9.0 and be a mega buff like me!

Whenever there is an obstacle in the way in the skating event, jump it (obvious really)! But if an obstacle is to the side of you jump anyway because you score as if you were jumping a true obstacle. When there are parts of the sidewalk missing press the button as shown in the diagram. Over 4000 can be scored in this way.



In the BMX event tabletop the logs on the ground. Do back flips on the small bumps (button 1 and right). On big bumps do forward flips (button 1 and left). See the diagram for what to do with other bumps. At the end press button 1 and left.

In the frisbee event always catch the frisbee overhead. (See diagram). You get massive points (350 in fact). Do this by pushing down when the frisbee is half way up the screen and roughly one screen away.



CONSOLE CORNER

MEET THE MAESTROS

Now's your chance to confront the teams that code and publish the games you play...in person. Check out the ACE Conference program for Spring 1990.

The ACE Conferences offer you the chance to join a small, select band of ACE readers who will be able to exert real influence on the way games are produced in Britain. It's all part of the ACE 1990 Campaign: to improve communication both within the games industry and between gamesters and the world at large.

Here's how it works. Each month we'll be arranging with a British software house for a group of ACE readers to visit them, meet the people who produce the games, ask questions, and make their own opinions known. Software houses are always keen to hear from games-players: now's you chance to make sure you're one of the ones they hear from.

Domark's Hard Drivin': just one of the games you can check out in this month's conferences.

WHAT HAPPENS

Once you've been selected for a particular conference (see What You Have To Do box), you'll be informed of the exact date and venue. You'll need to get there under your own steam so be sure to apply for conferences that aren't too far away from where you live. Don't worry if the current conferences listed are not in your area: there'll be more in the near future and we'll be covering the whole country, including Scotland, Wales, and Cornwall.

Conferences normally start at 12.00 noon and carry on to around 4.30. You get a buffet lunch and refreshment, and when you leave we'll also thrust an exclusive ACE T-shirt into your grubby hands. The software house may well have some goodies to hand out as well.

However, the real goodies will come from being able to talk directly to the software maestros themselves. They'll be ready to answer any questions you may have – and to defend their corner vigorously if you get stroppy! Obviously no-one likes to be slagged off for no good reason, but if you have constructive criticisms or strong feelings about a game, you can be sure that they'll be just as well received as paeans of praise.

And, of course, you'll also have the chance to meet members of the ACE Team, who will be just as keen to hear what you have to say as the software boys.

ON THE PROGRAMME

Here are three conferences that you can apply for this month. They are mostly in the SW area – next month we'll be moving northwards:

Activision *Venue: Reading area*

Your chance to talk to the company who have produced games ranging from the bizarre ***Little Computer People*** to the ingenious ***Cosmic Osmo*** and the rip-roaring ***Super Hang-on***.

Domark *Venue: Putney area (SW London)*

Meet the lads who've got the license to the superb ***Stun Runner***, produce the Atari coin-op licenses under the Tengen label, and put their foot down with ***Hard Drivin'***.

Electronic Arts *Venue: Slough area*

EA have a great modern office building and are typical of the new breed of highly successful American subsidiaries in the UK. They've brought you games ranging from the excellent ***Bards Tale*** series to ***Deluxe Paint*** and the sky-busting ***Interceptor***.

EA's Deluxe Paint III: you could have an animated discussion about this one!

WHAT YOU HAVE TO DO

Each month, we'll let you know about forthcoming conferences around the country. If you think you might be interested in attending one, all you have to do is send us a **postcard** with **your name and address** clearly written, together with a **daytime telephone number** if at all possible. You also need to tell us **which conference** you would be interested in attending (one choice only, please) and **your age**. We need to know how old you are so that we can ensure a good spread of age groups at each conference.

Unfortunately we have to limit the number of people attending each conference to 15. In addition, we have to make a nominal charge of £5.00 to help cover costs. All places are allocated on a first-come, first-served basis. There is however an exception to both these conditions: as a special offer to subscribers we are giving them **priority allocations** for the first ten places in each conference, and they may also attend **free of charge**. You can find out how to become a subscriber on page 49 (and you get other benefits too – a free issue, a special newsletter, and guaranteed delivery).

As soon as we decide on a time and venue for a conference, we'll select the lucky readers from those who have applied and inform of the relevant details. If anyone can't attend, they'll be shortlisted for a future conference and another selection will be made for someone who can take their place.

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ACE NEW WORLDS

PAT WINSTANLEY CHECKS OUT THE LATEST FANTASY SOFTWARE

DRAGONS OF FLAME

US GOLD continue the well received series of adventure games based around TSR's Dragonlance books with the sequel to *Heroes of the Lance*

Forget what I said a couple of months ago about the hack and slay element being toned down in this follow up to the *Heroes of the Lance*. Having finally managed to get my hands on a joystick I've been hacked about and slain more times than I can count in the past few days. This game is hard!

You begin by controlling the eight Companions of the Lance; Tanis the half elf, Caramon the fighter, Raistlin the mage, Goldmoon the cleric, Sturm the trainee knight, Riverwind the plainsman, Flint the dwarf and Tasselhoff Burrfoot the irrepressible Kender. As you travel you will also meet up with several non-hostile characters who may join your party and offer information and fighting skills.

As you attempt to fulfill your quest you may come across a variety of useful items. Acquiring an item increases your experience points and once taken can often be used by accessing the menu. Apart from extra weapons and armour, rings and potions can be found to enhance a character's abilities or perhaps heal a nasty wound. Since Goldmoon's stock of healing spells doesn't last long you'd be well advised to find some potions fast.

The graphics presentation of RPG's still hasn't progressed very far, but as you can see from DOF, things are getting better – slowly.

While weapons may be used in different ways and have different ranges this is not always particularly useful. Obviously, keeping your distance from monsters is desirable, but doing so in practice is well nigh impossible. As combat is joined the display changes from overhead to side on and any sense of direction you might have had flies away. This wouldn't be too bad if monsters only came at you from left or right, but when they appear both in front of and behind you without warning you'd better start praying.

As for the monsters, on the overhead map they appear very similar to each other but in close up there's a wealth of difference. Draconians come in two forms, Baaz and Bozak. Of the two the unarmoured Bozaks are the more dangerous as they explode when killed injuring anyone too close. Other monstrosities include giant wasps, griffons, trolls and wyverns. Each monster type is best tackled by a specific strategy. Thus war dogs will fight to the death – unless you feed them in which case they run away.

With all this going on it's easy to lose sight of your objective, your quest to free the slaves of Pax Tharkas and recover the lost Wyrmslayer. I can't see too many players getting that far unless they have the patience of a saint. Although more of an arcade adventure than a sedate RPG (like *Dungeon Master*) a save feature is incorporated. Whether you'll last out long enough to make saving worthwhile is another matter.

As an avid fan of the *Dragonlance* books both *Heroes* and this follow up are something of a disappointment to me as both rely far more on joystick waggling than strategy. However those of you with faster reactions and more practice at karate style games will probably find *Dragons of Flame* a good mix of exploration and combat.

LANDSCAPE 85
Although well drawn and colourful, movement in the close-up mode is desperately confusing.

ENCOUNTERS.....65
There's just no time for tactical warfare. Party members are often dead before they have a chance to strike a blow.

CHALLENGE.....65
There's not much challenge in any game that starts off almost impossible and stays there. It's far too hard for the average player.

SYSTEM 75
I dislike any system which gives no alternative to the joystick.

ACE RATING
720

The Champions are simply too weak to allow the player much satisfaction. It may be true (fantasy) life but as a game it will be far too difficult for most

CHAOTIC HINTS & TITBITS

Any *Dungeon Master* fans out there with an ST who haven't yet bought *Chaos Strikes Back* – shame on you. For those who have but are stuck, a few tips:

Counting the start as level 0 there are five levels below and at least 4 above.

Level (-5) has four main areas each of which has at least one exit through a solid wall which leads back to the main junction.

Count the screams when you fall to judge the depth of drop.

Drop down a hidden pit in Dain and you'll find yourself apparently trapped between four walls – simply step backwards (and look out for worms!)

At the Parting of the Ways, leaving the relevant objects in the alcoves lets you change your mind.

There are an awful lot of false walls!

Anyone found a use for the "key of B" yet? – I've a chest full of the things.

Hope you're having as much fun as me – cancel everything for a month.

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PC	£24.99dk	OUT NOW

HOUND OF SHADOW

Eldritch Games, who produced HOS for Electronic Arts: can Chris Elliott and Richard Edwards squeeze more out of the Timeline system next time?

Electronic Arts have finally released the definitive version of this RPG-influenced horror epic. The idea of a black magic, H.P. Lovecraft scenario set in the 1920's sounds like a sure fire hit...but is it?

Way back in issue 25 Steve Cooke checked out a preview copy of EA's *Hound of Shadow*. Now that the finished product is here, how does it measure up?

Hound of Shadow is presented as an RPG text adventure with full screen graphics in several locations. The system allows you to create a distinctive character with which to tackle the adventure. Your character can be saved at the end of the game for use in future products together with all the experience he or she has acquired while solving the *Hound*.

Character creation is quite separate from the game itself but has a profound influence on the way the plot unfolds and the difficulties you will face. You may choose from a variety of predefined characters which come with the game including an American-Irish cop turned Private Eye, a baronet with a passion for flying and a doctor's daughter making a living from writing novels.

If you don't fancy any of these you are free to generate your own character who may have a profession such as gentleman adventurer or psychic investigator. You then define your skills which include riding, haggling, escapology, archeology, anthropology, photography and astrology to name but a few. These skills will determine the way you play the game as information is offered or withheld depending upon your skill range and strength.

Set in and around London in the 1920's the plot revolves around a mysterious and horrifying force which you first encounter at a seance. Although you are certain that the medium is a fake he apparently becomes possessed during the proceedings and with a strange voice warns one of your fellow patrons that he bears the mark of the hound. Your companion recognises the voice used by the medium as that of a woman encountered in horrifyingly mysterious circumstances in America.

Together you set out to find more background at the Reading Room of the British Museum while becoming more aware as time passes that you are both in deadly danger. Initially puzzles are few, as are objects and play revolves around meeting different people at certain times to glean information. In fact the opening part of the game rather leads you by the nose as you follow instructions given in the text. Only when you have collected all the information you need are you free to explore further afield in a more traditional way.

One aid to exploring is the existence of mysterious magical gates which are scattered around the playing area and act as teleport points. Instead of tediously catching a train from East Anglia to London you simply step on a gate, chant the correct phrase and woosh! The gates are simply drawn on the ground and although you can't create new ones, existing ones can be wiped away by enthusiastic graffiti cleaners.

The Timeline system itself has a few problems. In order to maintain the flow of the plot you occasionally find yourself in a kind of loop which will not let you out until you make the required action. Apart from being very frustrating this also spoils the atmosphere of the game. There also appears to be something of a random element involved. Using one of the pre-defined characters whose skills include photography I began a game from scratch twice. In one version I discovered a camera in my room and wandered round London happily snapping away. In the second try - no camera!

Interaction of the parser with the plot flow can cause frustration too. A command such as ENTER SHOP will be obeyed early in the game to put you inside a useful bookshop. Later (presumably when all required actions have been performed there) the same command elicits a plaintive I DON'T POSSIBLE. Similarly the very useful GO command produces an erratic range of responses when used with identical destinations and circumstances. Having spent a good deal of time wrestling with the game I feel that many improvements and refinements are required before Timeline is used for other plots. In the end, frustration with the system outweighed my desire to solve the plot puzzles. Having said that I do look forward to future releases on the system.

RELEASE BOX		
ATARI ST	£24.99dk	OUT NOW
AMIGA	£24.99dk	IMMINENT
IBM PC	£T.B.A.	T.B.A.

LANDSCAPE 60
Nicely atmospheric sepia digitised graphics - but they can't be turned off once you've seen them. The text drips with blood, guts and horror.

ENCOUNTERS.....80
Non player characters simply ignore you if you can't give them the right (programmed-in) response. Conversation is very frustrating.

CHALLENGE.....75
From being led by the hand at every step you are suddenly plunged into complete freedom. This is not an easy game.

SYSTEM 50
As it stands Timeline just doesn't hang together well enough to be transparent to the player causing puzzles of its own to be solved before getting on with the game.

ACE RATING 650

As a first attempt with the Timeline system, *Hound of Shadow* is rather a mixture. This is not a game for beginners but could prove an enjoyable challenge for patient experienced adventurers.

TIME

EMPIRE break the time barrier. Should you follow them?

As text adventures fade into obscurity their place is being taken by icon driven systems which, while making play more attractive for the novice and younger player, can cause immense frustrations to those preferring more flexibility of input if they're not well-designed.

Set on the satellite Historiat as it travels its geocentric orbit around earth, your first task is to discover what you are supposed to be doing. It seems that time machines can now give access to the future through which it has been discovered that robots are going to devastate the earth unless they are stopped in the present. That's where you come in. By solving puzzles and talking to people you must gain access to various time zones to stop the rot.

Screen layout consists of a small window showing your location and other characters in the game against various horizontally scrolling backdrops. Beneath this is a row of icons which allow you to get, drop and examine objects, direct your character's movements and talk to other characters.

Objects themselves are scattered throughout the game – but you can't see them until you pick them up. The only indication you have is one of the icons – an eye which opens as you pass something of interest. Clicking on the eye then shows the object but doesn't say what it is. Although objects are well drawn, their identities can be something of a mystery. Thus what I thought to be a rather fat white ring to be worn actually turned out to be a certain brand of mint.

The only way to discover information is by talking to people – simply move next to your potential victim and click on the talk icon. If the character has something to say to you they will do so but you can't ask questions or direct them (except occasionally by offering them objects). Dialogue brings out a variety of personalities ranging from a receptionist who seems to be half in love with you to a small boy who, when bribed with a toffee, tags along behind like an unwanted puppy.

Having found the time machines you can travel back to well known scenes from the past which include the battlefields of the Crimea, the lions of the Circus Maximus and even a brush with Merlin. In all there are over 100 beautifully illustrated locations to explore and numerous characters to meet and interact with.

Apart from the niggle about objects, this should keep you puzzling happily for hours.

RELEASE BOX		
ATARI ST	£29.99dk	OUT NOW
AMIGA	£29.99dk	OUT NOW
No other versions planned.		

LANDSCAPE **75**
Beautiful graphics are very nice but forget where you dropped an object and you'll soon find them tedious!

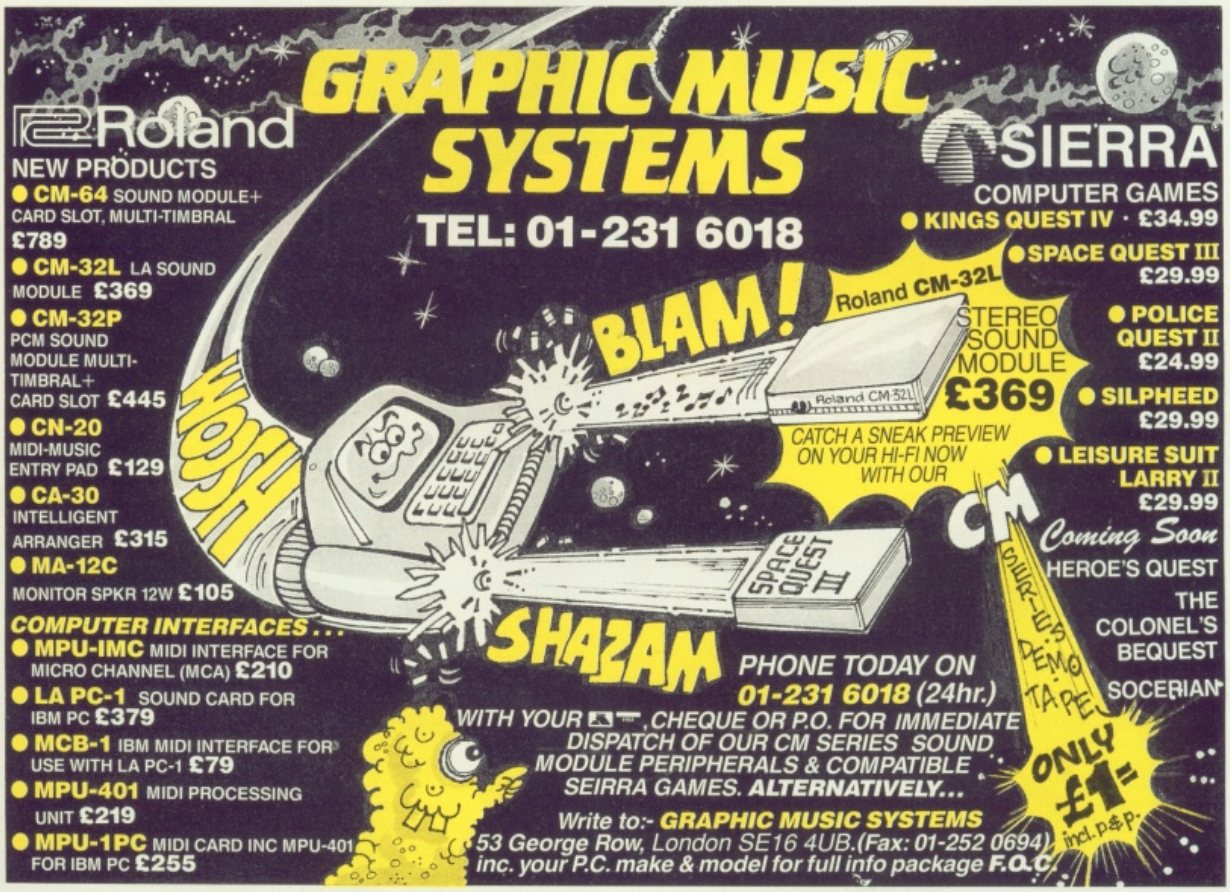
ENCOUNTERS **80**
Informative (and often hilarious) dialogue presents non-player characters as three dimensional personalities.

CHALLENGE **70**
Puzzles often have 'trial and error' solutions rather than offering an exercise in logic.

SYSTEM **70**
Despite the limitations of an icon driven system, the game is easy to control with many nice touches.

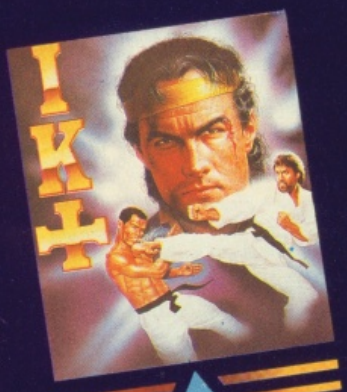
ACE RATING 750

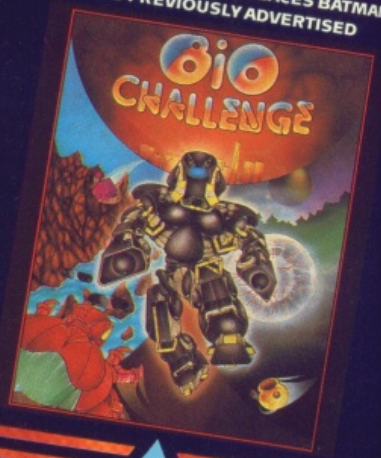
While *Time* is nothing exceptional its moderate difficulty level should appeal to most adventurers. Well worth a look.

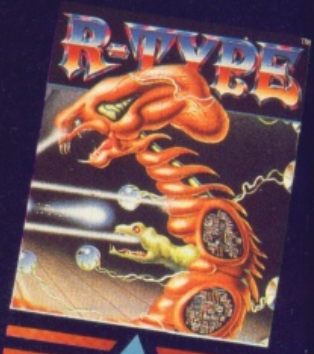


A POWERFUL PACK OF FOUR

BIO CHALLENGE REPLACES BATMAN AS PREVIOUSLY ADVERTISED







LIGHT FORCE

IK+

They called International Karate 'the greatest Karate beam 'em up yet' (Commodore User).
And who are we to argue?
But ARCHER MACLEAN has come up with a stunner: A third fighter. An amazing animated background. New moves (including double head-kick and a spectacular backflip).
Re-mixed music by ROB HUBBARD. And balls!
© 1987 Archer Maclean.
© 1987 System 3 Software Ltd.

BIO CHALLENGE

For centuries mankind has been on the wane. The genes that each generation of humans passes onto the next are becoming weaker. The human body will soon become too frail to survive.
Finally, scientists seem to have the answer. They have discovered a revolutionary technique to graft the human brain into the body of a robot.
The results of these experiments are to be tested in the BIO CHALLENGE – the ultimate ordeal.
You are a K.L.I.P.T. – the latest generation of human robot engineering – an extremely sophisticated human brain in a highly manoeuvrable precision-engineered steel body. Your only mission is survival ... for the human race.
© DELPHINE SOFTWARE.

VOYAGER

In 1977 Voyager II was launched – inviting all life forms in the Universe to visit our planet. Get ready – company's coming. Luke Snayles – returning to Earth after completing a 50 year sentence of "investigative exploration" is not a man you'd wish to meet. After half a century of solitude, he's bored and hungry. On Earth the gate crashers are about to arrive – they are the ROXIZ, but Snayles has got other ideas – no-one, but NO-ONE is going to spoil his home-coming party!
© Ocean Software Ltd. 1989.

R-TYPE

Deep in the cosmos, the ultimate terror .... The Bydo Empire – evil, horrific, deadly. In the dark recesses of time and space, its terrifying creatures roam the cosmos, waging war on the Planet Earth. The desperate battle has just begun .... As pilot of the R-9 fighter plane, it is your mission to crush these interstellar monsters using every sophisticated weapon at your disposal. Only your skill and reactions stand between brilliant victory – and the devastation of Mankind. ... At last, the arcade sensation bursts on to your home screen with several stages, terrains and a compelling scroll feature – the ultimate in thrilling gameplay.
R-Type™ ©1987 IREM Corporation.
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Open Fire!

Which game featured the first end-of-level nasty? Where did you first see parallax scrolling? Blast into the past with Eugene Lacey and the definitive ACE History of the Shoot-em-up...

Yup, they all owe their existence to the shoot-em-up: home computers, colour graphics, sound, super-smooth scrolling, power-ups...everything. The shoot-em-up is the Big Bad Alien Daddy of everything that sizzles in silicon.

Think we're exaggerating eh? Not a bit of it. It was the marriage between Nolan Bushnell's Atari coin-op games and home computing in the UK that gave the Sinclair Spectrum its final boost to mass market status. Computers were suddenly driven out of the electronics hobbyist arena and into the mass market by hordes of popping, squeaking, zapping alien craft. Bow down – and worship.

Space Invaders, naturally, is where the great trek starts. Devised by a group of Japanese psychiatrists (who should all have been given Nobel prizes), it took the world by storm and simultaneously gave birth to anti-computer mania, providing endless old grannies and youthful arty-farties with the ammunition to deride computer entertainment as 'mindless blasting' – something they still do today, though the target has been replaced by games that are anything but mindless.

For gamers however, it was the beginning of the great strategy debate. Was it best to count 21 ships before a satelite appeared? Should you go for horizontal 'creaming' as opposed to taking out the Invaders in vertical blocks? How could you best use the fortresses? And how do you deal with a 'ship on the run' – that last, single, Space Invader that accelerates at great speed towards your gun turret? These were weighty matters, much discussed in front of the flickering screen at watering holes around the country.

THE GOLDEN AGE

Nothing challenged *Space Invaders* in the Spring and Summer of '79. While the punks were pogoing to the Sex Pistols the gamers were content to peel off row after row of Invaders in the never ending search for the highest posssible score.

For the aliens, however, worse was to come.

Christmas that year brought us glorious technicolour opponents. The Galaxians were blue, red and yellow, and flaunted their superior intelligence by swirling and swooping around the screen in varying formations. They paid for it with their lives.

The action in *Galaxian* set the scene for the complex graphics backdrops of the future: the action took place against a jet black starry space scene, as opposed to the sombre darkness of *Invaders*. The improvements in sound, graphics, and gameplay thrust the cabinets into pubs, BR stations, and airports.

The success of *Galaxian* sent a clear message to the manufacturers – the punters wanted more shoot 'em ups, better graphics and colour. They would not have to wait long. November '79 saw the launch of *Atari Asteroids* – a return to black and white graphics, but this time your ship could be made to move in any direction all over the screen. It was one of the great-

SHOOT FROM THE LIP

OK, so you think you know everything about shoot-em-ups. There are five quick questions scattered throughout this article: bet you can't answer them all correctly. The answers are on page 90.

1. Which game starred in the first Atari VCS World Championship, and where was it held?

2. How much did Atari pay for the coin-op rights for ET?

3. Trackballs were first introduced in 1980. Was the first trackball-controlled game:
a) Missile Command
b) Centipede
c) Extricator

Moon patrol – June 1982 William's scrolling lunar shoot 'em up was the first game to feature parallax scrolling

When Steve Jobs was putting together the elite, hand picked team of computer designers who would work on developing the Apple Macintosh he knew that long hours would be required to complete the task. There were two social details that Job's was looking for at the interview – you had to like pineapple on your pizza and you had to be able to achieve a good score on Defender.

Super Zaxxon – 1983 Sega's beautiful 3D shoot 'em up was the catalyst for the quantum leap in graphical ability in the mid 1980's

Space ships were not the only themes gaining popularity in 1980. Stern launched *Berzerk* in November: the game placed you in control of a robot that could walk around the screen in any direction he fancied blasting nasties as he travelled. *Berzerk* may have been very basic graphically but it was still a first. The idea of controlling a character that could explore a terrain was later to be exploited to the full by games like *Commando* and, more recently, *Cal 50* and *Midnight Resistance*.

est games from the Golden Age – it featured an effective 'floating effect' (inertia) that was later to be copied in stacks of *Asteroids* clones and in games like *Lunar Lander*, *Omega Race* and, years later, *Oids*.

May 1980 saw the next significant launch in the shape of Nichibutsu's *Moon Cresta*. This otherwise uninspiring rework of the old *Galaxian* game featured one major break through – it offered the first power up. By docking with another section of ship your fire power was increased. It was a fantastic mid-game reward, and increased the playability by giving the gamer more to aim for than simply building up points for downing aliens. This gameplay improvement was not missed by either gamers or developers and *Moon Cresta* remains a pivotal game in the development of the shoot 'em up.

ENTER DEFENDER

1980 was a key year in the Golden Age for a much more important game – *Defender*. After Eugene Jarvis coded this game for the pinball manufacturer Williams the shoot 'em up would never be the same again. It was the first game that could be said to be truly 'cult' in a macho, esoteric way while at the same time commanding mass popularity.

What made *Defender* so popular was the challenge it presented – and what made it tough was its speed. You had a radar to show you the oncoming aliens but even with this aid you needed lightning reflexes to compete. The game also introduced the first rescue scenario in that you had to pick up the humanoids that were falling towards the planet floor as well as dealing with the aliens. The game was played on a horizontal plane – scrolling in both directions and with a 'wrap around' effect which meant that if your ship disappeared off the the right it immediately reappeared on the left.

Defender was also very loud. The colourful streaks of laser fire spitting out of your ship had a screeching sound effect. It was the biggest, toughest, noisiest machine in the arcade and, if you couldn't play it, you were nobody. Its influence on later games was incalculable: the radar, rescue, 'wrap around' effects being borrowed in countless designs – from Llamasoft's *Attack of the Mutant Camels* to Logotron's *Star Ray*.

Spring-'81 saw the main competition in the shoot 'em up wars taking place on the West Coast of America with a flurry of new Atari designs battling it out with *Defender*. *Battlezone* offered the first 3D vector graphics in a tank battle simulation and became an instant hit – few who played it will forget the first time their windscreen shattered as they were blasted from behind.

INTO THE HOME

By now Atari had realised the potential of converting their coin-op games for home use on their VCS system. *Space Invaders*, *Berzerk*, *Defender*, *Galaxian* and

Star Trek – 1983 Sega's first licenced games were only a limited success

Darius by the Edge - turns Taito's three screen masterpiece into a one screen shoot 'em up for the ST and Amiga

Asteroids could all be played at home for about £30 a throw. It was the beginning of a link between the arcade and the home that would never be broken. It also made a fortune for Atari. By the end of 1983 they had sold ten million VCS's in America alone and several more million cartridges.

Apart from providing Atari with the funds to develop several more classic games, the VCS bequeathed one vital, original game to the library of classic shoot 'em ups. The game was *Star Raiders* and was developed by Fernando Herrera. This was the first 3D, deep space shoot 'em up. It was a precursor of *Elite* in that it had many of the same features, including a progressive rank scoring system and a galactic map. Above all, it gave us that swirling and swaying space battle action with the aliens emerging from the centre of the screen as tiny dots and growing larger as they approached your cockpit.

Meanwhile in the arcades those companies that didn't have a lucrative home system to peddle were not giving up the ghost. Centuri shipped *Phoenix* in March 1981. It looked a lot like *Galaxian* in its earlier levels but had one very important difference. After downing several squadrons of aliens you were confronted by a giant bird that you could only kill by lobbing sufficient missiles into its mouth. This was the first end-of-level nasty. Since *Phoenix* almost every shoot 'em up has had an end level nasty of some description.

BOMBS AWAY

Stern were still active ,shipping the classic *Scramble* in April '81 and following it up with *Super Cobra* in July. Whilst not quite as big as *Defender*, *Scramble* was another highly significant game in the development of the shoot 'em up. It was the first game in which you had to have a high regard for flight controls – as well as a quick finger on the bomb and shoot buttons. Your ship had to be manoeuvred through an intricate level of narrow, undulating corridors and passages, blasting a path as you flew. This feature was copied on stacks of clones both in the arcade and on the popular home systems of the day. It is still a feature of the scrolling shoot 'em up – from *Gradius* to *R-Type* – flight control is as much a part of the challenge as blasting itself.

Midway clambered back into the limelight with *Galaga* at the beginning of 1982. *Galaga* represented another giant leap forward in the development of power ups. There were now several sections to be bolted on to your ship – including a unique power up feature with two ships joined together doubling the fire power at your finger tips.

GASPWORTHY GRAPHICS

In the four short years since *Space Invaders* the SEU had come a long way in game design. They were now far more challenging with much more to do than the simple left-right-shoot of *Invaders*. But the graphics were still fairly basic. In those days you went into the

arcade to see what game challenges were to be had. It was not like today where you can stroll around and enjoy the graphical wonders on display without even having a go.

All this began to change in Marcn '82. Sega launched *Zaxxon*. It was the first of the 'gasp look at those graphics' games. Its pseudo 3D play area featured a gull winged space ship flying over a city scape – through fences and over walls blasting the robots that came towards you. Its gameplay was pretty limited – but it looked fantastic. The games that were to follow had to look good too, and it was in this period that graphics began to take precedence over the design of the game itself. There were one or two exceptions like – *Tempest* and *Gyruss* but generally the watchword had become the prettier the better.

Williams *Moon Patrol* was a summer hit with its superb lunar landscapes and 'parallax scrolling' – giving for the first time the authentic effect of the foreground moving faster that the land in the distance as the moon buggy rumbled along the planet surface. This has become so much a part of modern gameplay that it is now a dedicated graphics hardware feature on modern 16-bit consoles.

Metallic effects – later to be used to such great effect in games like *Uridium* – first surfaced in Atari *Xevious* in April '83 in what was the first of the modern style vertical shoot 'em ups.The landscape featured craters with shadow, changing terrain of forrest, desert and sea with metal domed alien structures for you to bomb. Power ups were to be gathered on the way with a giant installation to deal with at the end of each level.

Literally hundreds of games on a variety of systems have copied the basic design of *Xevious* – but as we can see *Xevious* itself was no more than a collection of the ideas that had gone before. It was not, in fact, a particularly good execution of the best of shoot 'em up game play features. That would come later in 1984 and 1985 in games like *Terra Cresta*, and *Slap Fight*.

LICENSE TO KILL

By late '83 licensing was beginning to effect the shoot 'em up in a big way – both at home and in the arcade. In September of that year Atari shipped *Star Wars* – a vector graphics challenge in which the player had to destroy the Death Star by flying down a tunnel and delivering the killer missile.

This was also the first use of speech synthesis in a game ('Let the Force Be With You!'). Everyone thought that it was the beginning of a boom in talking games. The reality is that the computers were not powerful enough to incorporate speech to any extent – a fact that is still largely true today, though games like *Stun Runner* ('Yee-hoo!') still make effective use of short speech samples.

Robotron – 1984
This cult game didn't quite reach the mega-hit status of Defender for Eugene Jarvis and Williams

GUNG HO!

1985 saw the introduction of the militaristic shoot-em-up which has been so popular in recent months. Hit of the year was Capcom's *Commando* – an all directional scrolling 'Nam style shoot 'em up. Several game play elements were firsts; the idea of endless foot soldiers coming at your commando, necessitating constant swivelling through 360 degrees to avoid a bullet in the back was the main one.

The commando could also hop aboard jeeps and armoured vehicles giving the player something to drive as well as manipulating the soldier. But it was the graphic style of *Commando* that has been copied to death: an impressive theatre of war with highly realistic tanks, armoured cars, jeeps, and weaponry. Since *Commando*, shoot 'em fans have been fed on a constant diet of ever more realistic military hardware.

The militaristic shoot 'em up reached its zenith in Konami's *Green Beret*. *Green Beret's* great hook was curiosity. The tanks, planes, and submarines were so well drawn that you simply had to dash through the next level just to see what the graphics would be like in the next few screens. This was by no means the first time the graphical hook was the main motivation in a game – Scramble had it, as did Salamander – but Green Beret took it to the limit, and every shoot 'em up that came after it had to conform to the rule.

Despite US Gold's 1986 Christmas No 1 *Gauntlet* has not become a lasting classic either at home or in the arcades. The four player interface required to make it work properly is only available on the PC Engine - and the *Dungeon Explorer* game to play on this system is the best home interpretation of *Gauntlet*. Game play wise *Gauntlet* was very basic – a simple matter of shooting things and grabbing treasure.

4. Who produced the first Wild West shoot-em-up, and what was it called?

5. Eugene Jarvis, programmer of *Defender*, later produced a sequel. What was it called?

Millipede, Atari
The sequel to the enormously successful Centipede, and one of the few games to employ a trakball instead of a joystick

EARLY ALIEN BIRDS

As a result of its success, various companies snapped up the rights for Space Invaders for different territories – Midway brought it out in the States and Taito marketed it in the UK. Wherever it appeared it was an instant success – but it wasn't the only game you could have put money into in the Autumn of 1978.

Atari's Skydiver, Avalanche, and Smokey Joe had already carved a niche in the market months before Space Invaders showed up. Sega were also there right at the beginning with Blasto and Gee Bee – a pair of shoot 'em ups that were swallowing coins a good six months before Space Invaders arrived on the scene that October.

Williams themselves had tried a game called Space Walk in July and had done reasonably well with it. But after Space Invaders arrived these games may as well not have existed – the simple shoot 'em with its rigid columns of kamikaze invaders and heart-beat sound effects swept all before it.

Opereation Thunderbolt. Warfare has never been more graphic. Ocean have earned a fortune by converting coin-op shoot 'em ups for use

Sega were continuing to make things look pretty in 3D but still failing to innovate in the game design department with games like *Super Zaxxon*, *Star Trek*, and *Buck Rogers*. But sticking to the 3D knitting would later pay dividends later with games like *Space Harrier* and *Afterburner*.

HOME HIGHS

By the mid 1980's the home computer was riding high. Video game consoles had crashed and shoot 'em up action sitched to the home computer as things also began to settle down on the coin-op front at the same time. Bug Byte had won the race to market the first game for the Spectrum by writing it in large part on the basis of the manual – without even seeing the computer. Naturally the game was a shoot 'em up, a rework of the daddy of them all entitled *Spectral Invaders*.

High spots in the arcades of '84 and '85 were the extraordinarilly pretty *Salamander* and its sequel *Nemesis* by Konami. These games were the forerunners of *R-Type*. A return to horizontal scrolling with stacks of power ups and tremendous effort put into the graphics of the creatures. Snakes , serpents, and robot-like insects. Interms of graphical and game play quality the coin ops had made a quantum leap forward. It would take another two years before the home systems would start to catch up with the launch of the ST and the Amiga.

SATELLITES

The use of power ups was becoming increasingly sophisticated. Capcom's *1942* was a World War II aerial shoot 'em up. Flying up the screen you had to attack the Japanese shipping whilst taking out their fighters and bombers. First the power ups gave you additional fire power – but pretty soon you had additional planes ('satellites') accompanying you, flying on each wing, and the most powerful smart bomb you could imagine that wiped everything in a deadly circle of flames. *1943* was to follow in '86 and *Flying Shark* in '87 but the military shoot 'em up had peaked – the hit of the year was *Gauntlet*.

Atari's *Gauntlet* was the first four player shoot 'em, up with a Tolkien style scenario. It featured a 'buy

in' option, i.e you could join in the mayhem if there was a spare joystick by simply inserting your coins. You would then appear in the midst of the fight and could start blasting away against the trolls, goblins, and other assorted nasties that occupied the mazes.

WELCOME TO THE MODERN WORLD

If 1978 to '83 represented the Golden Age of shoot 'em ups then 1987 must go down as the beginning of the new wave.

The year opened with *Side Arms* and *Soldier of Light* – two shoot 'em ups that pushed the power-up to the limits. The programmers were working with new hardware which enabled them to draw and animate huge sprites in full colour. New sound chips were also on stream which facilitated a huge range of sounds. As the year progressed these features became even better in games like *Victory Road*, *Legendary Wings* and *Slap Fight*.

The developers were starting to innovate again as the air became filled with new ideas. Taito knitted three screens together to make one constant play area allowing for brilliant, long streaks of laser fire. The game was called *Darius* and was a huge two player hit – even if the vast size of the cabinet meant that a lot of arcades couldn't find room for it.

Darius was clear evidence of the increasing sophistication of the shoot 'em up. It featured a galactic map which the player had to become familiar with – knowing the best route to take from level to level if he

Commando – Capcom
The shoot 'em up that was number one in the home and the arcades at the same time

was to have a good chance of clocking it. It also featured extremely tough end-of-level aliens that had to be systematically destroyed piece by piece in the correct order. The days of flying from left to right, collecting power ups, and blasting anything that moved were over.

Space Harrier in 1987 proved that Sega could make things move faster, prettier, and more convincingly in glorious 3D than anyone else in the world. The addition of a hydraulic seat and the choice of a supersonic jet fighter proved an effective combination for Sega – giving them the coin-op hit of the year in '87 in the shape of *Afterburner*. *Thunderblade* followed the following year – with Sega also managing to squeeze in the driving game hit of the decade, *Out Run*.

Brilliant as they are the Sega Shoot 'em ups offer little to the development of shoot 'em up game play other than the 'gaspability' of the graphics. They are more of a sight seeing tour than a challenging game. However, it's probably too early to judge Sega's contribution to the development of the shoot 'em up. They have an excellent engine in the shape of their 3D know-how and we can only hope they start to develop more sophisticated scenarios to take advantage of it.

X-Out, Rainbow Arts
A shoot 'em up to play at home that is right up to date with the latest developments in the arcade

QUIZ ANSWERS

1. Atari held the Centipede World Championship in Munich, flying in youngsters from all over the world.
2. When the rights to ET were offered to the toy trade Atari executives sent their lawyers along to the bidding with an open cheque. They paid 23 million dollars for the rights to a game that was later to flop out of sight.
3. (a) Atari's *Missile Command* was launched in June 1980 and was the first to use a tracker ball. *Centipede*, (which used a smaller trackball) first blasted the bugs in the cabbage patch in 1981; *Extricator* doesn't exist!
4. The first Wild West shoot 'em up was Exidy's *Bandido*. The same company also pushed colour graphics further than they had gone before with the extraordinarily pretty *Star Fire*.
5. Jarvis went on to produce two further games – *Star Gate* (the sequel to Defender) and Robotron – a frenzied robot shoot 'em up with aliens coming at you from all directions. Both of these games enjoyed considerable success but it is Defender that has influenced shoot 'em up design right up to the present day.

THE FUTURE OF THE SHOOT 'EM UP

There are both hopeful and gloomy signs as the 90's gather steam. On the down side, stacks of copy cat *Operation Wolf* clones are about to hit the arcades. Games like *Beast Busters* from SNK, and *Line of Fire* from Sega offer little enhancements to the Taito original.

On a more positive note Irem continue to lead the good fight for a more intelligent and challenging shoot 'em up. *X-Multiply* offers many more innovations – like moving wings that flow in the gush of wind caused by the movement of your ship. These contain deadly stings that can kill the serpent by blowing against them – forcing the player to develop his flight skills as much as his shooting skills.

Dragon's Breed introduces the first remote controlled power-ups by letting you send your dragon off to a certain position to breath his fiery breath in a little mini mission whilst you blast away elsewhere on screen. You can summon your dragon back anytime you like, hop on him and fly off to another part of the screen.

Best of all, *R-Type II* is about to ship to the arcades as we go to press. The game offers more carefully planned shoot 'em up action. It also adds an even more sophisticated power up in the shape of the Scatter Cannon.

Meanwhile, we can all accelerate progress towards the modern shoot 'em up by voting with our dosh. Seek out the good games and support them with your hard-earned dosh. If the history of the shoot 'em up proves anything, it is that the developers only start to innovate when their revenues start to fall.

R-TYPE – THE ULTIMATE?

The game that pushed the shoot 'em forward more than any other in '87 owed nothing to hydraulic chairs or other gimmicks. It remains, in many connoisseurs' opinion, the definitive shoot 'em up: *R-Type*, by Irem.

What makes it special is the combination of skills that it demands from the player. Its varying of pace means that the player must be able to move and shoot in tight, narrow situations as effectively as at speed when everything is coming at you. Above all, the successful *R-Type* player must know how and when to use the power ups.

The best example of this is the giant green ship that must be destroyed – bit by bit – on level three. It's no good tooling up and blasting away at it. You have to manipulate your power ups – throwing certain weapons from front to rear as and when required. You also have to scroll gently around it, being careful not to get crushed against the planet surface as the ship moves.

In *R-Type* the game play has been designed to offer maximum interactive entertainment. It pushes the shoot 'em up by demonstrating that innovation needs to be more than just fast moving colourful sprites. Sadly, it seems to be taking a long time for the other developers to follow the Irem lead.

IN THE PINK

THE ACE STOCKMARKET 102
Which games are currently hitting the highspots? Find out in Britain's only games chart that tells you which titles are getting the **best reviews**, not just which titles the barrow boys are forcing onto the shelves.

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ASK MEL!

We now have a full-time Pink Pages reader's liaison officer: Melanie Costin, who will always be on hand to help you out with problems about Reader's Pages and or Pink Pages mailorder difficulties. If you're a dealer and would like to place an advertisment in the pinks or arrange a voucher offer, contact Jerry Hall on 01-251 6222 Ext. 2485.

THE GAMES YOU HAVE TO HAVE...

SOMETIMES YOU KNOW YOU'VE GOT TO FACE UP TO THE TRUTH. YOUR SOFTWARE COLLECTION IS GETTING YOU DOWN, YOUR DOG'S SICK, YOUR FRIENDS ARE CONVINCED IT WAS YOU THAT LOST THE WINNING POOLS COUPON, YOUR MOTHER HAS DECIDED YOU NEED TO CHANGE YOUR IMAGE, AND YOUR GIRLFRIEND (OR BOYFRIEND) HAS JUST BEEN EATEN BY A ROTTWEILER...THERE'S ONLY ONE THING FOR IT...GO OUT AND GET A NEW GAME. AND TO MAKE SURE YOU REALLY SEE THE BRIGHT SIDE, HERE'S A LIST OF GAMES YOU'VE JUST GOT TO ADD TO YOUR COLLECTION.

ARCADE STYLE

Including coin-op conversions. Games with a high fun factor and plenty of addictive action feature in this category.

ARKANOID

Imagine ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk ● Atari XL/XE £8.95cs ● Atari ST £14.95dk ● MSX £8.95cs ● IBM PC £19.95dk

Conversion from *Arkanoid* the coin-op, in its turn the best version of the classic *Breakout*. Simple in concept: the player controls a bat at the base of the screen, whizzing it left and right. The object is to keep a small ball in play, bouncing it off the bat to destroy formations of bricks in the top half of the screen. Eliminate all the bricks and move on to the next of 33 screens. Clever extra features contribute to the addictiveness. As a faithful coin-op conversion, *Arkanoid* comes out top, but for a different slant on the same theme and some nifty music, try ASL's *Impact*, which also builds up the difficulty levels more gradually.
★ **ACE CLASSIC**

BOUNDER

Gremlin Graphics ● Spectrum £7.95cs ● C64 £9.95cs £12.95dk ● Amstrad £8.95cs £13.95dk

A great arcade bounce-em-up, and very addictive too. You guide a ball as it bounces from one platform to another, high above the vertically scrolling landscape. Land on marked squares and you can stay aloft longer or gain a mystery bonus. Fill in a gap or hit one of the game's many nasties, however, and you'll lose a life. Bonus bouncing sections at the end of each level help vary the pace, and those tough gaps really keep you coming back for more. Bright, witty graphics, great music – and it's so playable.
★ **ACE CLASSIC**

BUBBLE BOBBLE

Firebird ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk ● Atari ST £19.95dk

Playability is the essence of this two-player coin-op conversion. You and a friend play bubble-blowing dinosaurs, travelling through 100 maze-and-platform screens, fighting off the 'bullies' by encapsulating them in your bubbles to turn them into juicy fruit. More firepower and various bonuses await as you reach the more difficult later screens. Enormously good fun, if a little on the cutesy side. Can also be played as one player against the computer.
★ **ACE RATED 958**

CONQUEROR

Superior ● Archimedes £24.95dk (Amiga and ST versions under development)

Drive around in your very own tank! Blast the enemy in close combat and plan your strategy for the campaign. This is a tricky game to get to grips with, but if you persevere you'll find you soon become mesmerised by the thing. If you ain't got a 1Mb Archie though – forget it!
★ **ACE RATED 931**

ELIMINATOR

Hewson ● Spectrum £7.99cs £12.99dk ● C64 £9.99cs £14.99dk ● Amstrad £9.99cs £14.99dk ● Atari ST £19.99dk ● Amiga £19.99dk

Graphically wonderful roadway blast-em-up by John Phillips, which will twist your joystick inside-out. It'll even have you driving on the ceiling. Though it's tough to get to grips with at first, the addiction level's so great you'll keep coming back for more.
★ **ACE RATED 904**

EXOLON

Hewson ● Spectrum £7.95cs ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £14.95dk

Graphically superb horizontally scrolling shoot-em-up in which you run, duck and jump your way along a planet's surface blasting away at alien defences. A gun and a missile launcher are used to blast the foes, but if things are still too tough then you can grab an exoskeleton for extra protection and fire power.
★ **ACE CLASSIC**

NEW ZEALAND STORY

Ocean ● Spectrum £8.95cs, C64 £9.95cs, Amstrad £9.95cs, ST £19.99, Amiga £24.99

Although pipped at the post in a head to head with Rainbow Islands, New Zealand Story is not a game to be ruled out. It is immense fun to play, provides lots of varied action across many levels. Definitely worth checking out.
★ **ACE RATED 875**

OIDS

Mirrorsoft ● Atari ST £19.99dk

A magnificent *Thrust*-ish blast. The Oids are relying on you to save them, but the Biocretes aren't going to let them go without throwing missiles, rockets and a number of other weapons at you. Included with the program is an edit facility that allows you to design your own planetoids – great stuff!
★ **ACE RATED 969**

PITSTOP 2

Epyx/US Gold ● Available only on Epyx Epics compilation ● C64 £9.95cs £14.95dk ● IBM PC £29.95dk
(in compilation with *Winter Games* and *Summer Games 2*)
Thrilling racing game where the screen is split into two and you can race the computer or a friend. Lots of different Grand Prix circuits, tyre blow-outs and of course the all-important pitstops guarantee to give you hand cramp and your brain a real racing treat.
★ **ACE CLASSIC**

POWER-DROME

Electronic Arts ● Atari ST £24.95dk

This superb arcade-style futuristic driving simulation will have you enthralled for months to come. It may not be terribly easy to get straight into but it's well worth persevering with. You'll be playing this for months.
★ **ACE RATED 925**

PURPLE SATURN DAY

Exxos ● Atari ST £24.95dk ● Amiga £24.95

A terrific mix of games that delivers punch both audio and visual. The consistently good gameplay ensures you'll enjoy playing each sub-game time and again. It's a little tricky to get the hang off, but master it and you'll be pleased you persevered.
★ **ACE RATED 912**

RAINBOW ISLANDS

Firebird, Spectrum £9.95cs £14.95dk, C64 £9.99cs $14.99dk, Amstrad £9.99cs £14.99dk, ST £24.99, Amiga £24.99

The sequel to Bubble Bobble is nothing short of fantastic. The graphics and sound are superb, as is the gameplay.
One of the best (and cutest arcade conver-

sions of the year that should not be missed.
★ ACE RATED 934

RVF

Microstyle, ST £24.99, Amiga £29.99

RVF offers a near endless supply of fast paced bike action as you race your Honda RVF. Attention to detail is paid out all along the route with your rider giving the bike a push start after a crash.
An excellent mix of arcade and simulation.
★ ACE RATED 915

SPIDERTRONIC

Ere International ● Atari ST £19.95dk

Guide your spider-like character around the game area, collecting coloured panels in the correct order. The built-in construction set means you'll be knocking out your own levels till the cows come home.
★ ACE RATED 903

SUMMER GAMES

Epyx/US Gold ● C64 £9.95 cs £14.95dk ● IBM PC £29.95dk

Epyx sporting simulations are of high quality but none have quite captured the playability and style of the original *Summer Games* and its immediate successor, *Summer Games 2*. One to six players can take part in high jump, gymnastics, springboard diving, clay pigeon shooting, swimming, pole vault – and others – with lovely large graphics and smooth animation throughout. Control of your athlete can be complex so practice is recommended.
★ ACE CLASSIC

SUPER SPRINT

Electric Dreams ● C64 £9.99cs £14.99dk Amstrad £9.99cs Spectrum £9.99cs ● Atari ST £19.99dk

One of the better coin-op conversions currently available. With up to three players all competing at once, the action is fast and furious and it will take a finely-tuned car to complete some of the more tortuous circuits that appear later in the game.
★ ACE RATED 907

THRUST

Firebird ● Spectrum £1.99cs ● C64 £1.99cs ● Amstrad £1.99cs

Terrifyingly sensitive controls and a large helping of real-life physics make this budget title an absolute must. Flying down through the caverns of an enemy-held planet, you have to pick up fuel and destroy hostile gun turrets without crashing into the tunnel walls. Tough enough as it is, but then you've got to make the return journey with a heavy load slung under your craft. Very mean, very addictive.
★ ACE CLASSIC

URIDIUM

Hewson ● Spectrum £8.95cs ● C64 £9.95cs £12.95dk ● BBC £9.95cs £14.95dk

The piece de resistance of scrolling shoot-em-ups: blast the dreadnought and attacking ships while dodging around any large structures. Great metallic-looking dreadnoughts and the smoothest scrolling you'll ever see put this head and shoulders above the opposition. A game not to be missed, especially now that C64 versions come packaged with the excellent *Paradroid*.
ACE CLASSIC

ZARCH / VIRUS

Superior Software ● Archimedes £19.95dk ● Firebird (16 and 8-bit versions) Amiga £19.95dk ● Atari ST £19.95dk ● Some 8-bit versions under development

A solid three dimensional shoot-em-up with such graphic perfection and timelessly addictive gameplay that it became an instant classic. Now the 16-bit versions have arrived and they're just as good as the 32-bit versions.
★ ACE RATED 981

ADVENTURES

After a brief surge of RPG_related popularity, the traditional text-entry adventure is rapidly disappearing. But for those of you who savour the powers of the imagination, the verbal twist, and the thrill of encountering other characters, this game genre still has much to recommend it. Here are some of the all-time great computer fantasies...

BEYOND ZORK

Infocom/Activision ● C64 £19.99dk ● PC £24.99dk ● Amiga £24.99dk ● Atari ST £24.99dk

Infocom's attempt to muscle in on the role-playing market is a great success. Locate the fabulous Coconut of Quendor in a game that combines the wit and ingenuity of one of the world's most original software companies with state-of-the-art parsing and gameplay. Text-only, but with an on-screen mapping facility.
★ ACE RATED 902

CORRUPTION

Rainbird ● Atari ST £24.95dk ● Amiga £24.95dk ● PC £24.95dk ● Spectrum £15.95dk ● C64 £17.95dk ● Amstrad 6128 £19.95dk

This tale of insider dealings, infidelity and crooked business deals is unlikely to appeal to adventurers who prefer to wander through vast dungeon networks seeking treasure. But for those who are fed up with traditional adventuring, it's like a breath of fresh air. Superb graphics, great atmosphere and a nail-biting plot makes this a terrific game that grips from the start.
★ ACE RATED 920

FISH

Magnetic Scrolls ● PC £24.99dk Amiga £24.99dk

More gameplay than *Corruption*, better game design than *Jinxter*, and not as quirky as *The Pawn*. This is definitely MS's best release since *Guild Of Thieves*. Good stuff indeed.
★ ACE RATED

GUILD OF THIEVES

Rainbird ● C64 £19.95dk ● Spectrum £15.95dk ● Amstrad 6128 £19.95dk ● Amiga £24.95dk ● Atari ST £24.95dk ● PC £24.95dk

One of Britain's newer adventure software houses – Magnetic Scrolls – managed to produce a traditional treasure hunt with superb graphics and some very tricky puzzles. Powerful parser helps to create a convincing game world with humour and imagination.
★ ACE CLASSIC

INGRID'S BACK

Level 9 ● Atari ST £19.95dk

A great follow-up to *Gnome Ranger*. Level 9 have really got to grips with the use of characters in their games and how to program them very effectively.
★ ACE RATED 920

JEWELS OF DARKNESS

Rainbird ● C64 £14.95cs ● Spectrum 128 £14.95cs ● Amstrad £14.95cs £19.95dk ● PC £19.95dk ● Amiga £19.95dk ● Atari ST £19.95dk

Level 9 have put together three of their classic releases, *Colossal Adventure*, *Dungeon Adventure* and *Adventure Quest* in one bundle. The games have been updated with graphics and larger vocabularies and are as close to the original spirit of adventuring as you're likely to find.
★ ACE CLASSIC

LURKING HORROR

Infocom/Mediagenic ● C64 £19.99dk ● ST £24.99 I Amiga £24.99 ● PC £24.99

Infocom's tribute to H.P. Lovecraft and the horror-fantasy genre sends you into a cold sweat as you discover something very nasty lurking beneath your college laboratory. Superb text-only game that defies you to play it after dark...
★ ACE CLASSIC

TIME AND MAGIK

Mandarin ● Spectrum £14.95cs £14.95dk ● C64 £14.95cs £14.95dk ● Amstrad £14.95cs £14.95dk ● Atari ST £19.99dk ● Amiga £19.99dk ● PC £19.99dk

This compilation of the Level 9 games, *Lords Of Time*, *Red Moon* and *The Price Of Magik* have been re-vamped with better parsing, bigger vocabularies and pictures added. Superb value if you don't already own them.
★ ACE RATED 919

ZORK ZERO

Infocom Versions due out about now. Watch this space for price info. Highly enjoyable with a variety of challenges that make for instant addiction. A bit more character interaction would have made this a real humdinger, but even so it remains one of the best games of the year so far.
★ ACE RATED

PUZZLES

If you're after a game that will provide you with a real challenge, without necessarily requiring large doses of strategic thinking, then it's a puzzle game you want.

BONE-CRUNCHER

Superior Software ● C64 £9.95cs11.95dk ● Amiga £14.95

At first sight this recent release may appear to be nothing more than a boulderdash rip-off. However there are a number of innovative gameplay features which give Bonecruncher a feel all of its own. Highly recommended for those who prefer to solve problems rather than shoot them.
★ ACE RATED 948 – AMIGA

BOULDERDASH

Prism Leisure Corporation ● Spectrum £2.99cs ● C64 £2.99cs ● Amstrad £2.99cs

A game that has everything – instant addiction, long-term challenge, frenetic excitement as the clock ticks down and extremely tricky puzzles. You must collect jewels hidden in caverns, digging away earth and boulders to get tat them. Boulders can drop and cause you serious damage, while the jewels are often hidden by seemingly impenetrable walls. Complex but great fun. Boulderdash is a classic you can't afford to miss in its budget incarnation.
★ ACE CLASSIC

DEFLEKTOR

Gremlin/Vortex ● C64 £9.99cs ● Spectrum £7.99cs ● ST £19.95dk

Optics are the order of the day here (not the spirit dispensers) as the player tries to connect a laser beam to a receiver and at the same time destroy a

number of cells that are on screen as well. You'll need to make full use of the mirrors, fibre-optic conduits and polarising and refracting blocks if you're to achieve your aim. Clear the first screen and you'll only have 59 more to do. Fascinating stuff that's horribly addictive.
★ ACE RATED 906 – ST

NEBULUS
Hewson ● C64 £9.99cs £14.99 dk● Atari ST £14.99 dk

Guide pogo to the top of eight towers using the spiral of platforms, lifts and ledges that form the route. It's a highly original game that strikes a fine balance between frustration and addiction, added to which is the rotary scroll, thus making it a good-looking, playable winner of a game.
★ ACE RATED 943 - C64

SENTINEL
Firebird ● Spectrum £9.95 cs ● C64 £9.95cs £14.95dk ● Amstrad £9.95cs £14.95 dk ● Atari ST £19.95dk ● Amiga £19.99dk

Bizarre and compelling strategy game played over the chequered surface of a planet dominated by the Sentinel. Fundamentally you have to absorb energy while trying to stop the Sentinel from absorbing yours. A clean brain and fast trigger finger are both necessary in this very original and large - 10,000 possible landscapes - game.
★ ACE RATED 963 - AMIGA

SKULL DIGGERY
Nexus● Atari ST £19.95

Boulderdash clone that completely outdoes the original on this particular machine. Again (see Boulderdash above) you're digging for diamonds in caverns over a hundred different screens - with a time limit for each screen. Skulldiggery scores on playability (easier screens to begin with and a choice of starting point) and its entertaining two-player option.
★ ACE RATED 919 - ST

SPORE
Bulldog ● C64 £1.99cs ● Amstrad £1.99cs ● Spectrum £1.99cs

The winning combination of strategy, frenzied blasting and great graphics make Spore a worthy full-priced release - what a bargain then to be able to pick it up for £1.99!
★ ACE RATED 919 - C64

TETRIS
Mirrorsoft ● Spectrum £8.99 cs ● C64 £8.99cs £12.99dk ● Amstrad £8.99cs £12.99 dk ● Atari ST £19.95dk ● Amiga £19.99dk ● IBM PC £19.99dk

A fascinating geometrical oddity, this Russian puzzler turns the obscure mathematical topic of packing into a cult game. One at a time, shapes fall downwards into a rectangular playing area. Left to their own devices they'll pile up until they reach the top of the screen; your task is to guide them down and pack them tightly so that doesn't happen. Different versions have proved to be rather variable in their arcade aspects, but the brilliantly simple idea behind them means they're well worth a look whatever your machine.
★ ACE RATED 959 - C64

THINK!
Firebird ● C64 £1.99cs ● Amstrad £1.99cs ● Spectrum £1.99cs

Originally released by Ariolasoft at full price, but now available for a fraction of that from Firebird. It's a horribly addictive game played on a 6x6 grid - either one or two player - in which you attempt to connect four counters, horizontally, vertically or diagonally.
★ ACE CLASSIC

XOR
Logotron ● BBC £9.95cs £12.85dk ● Amstrad £9.95cs £14.95dk● Spectrum £7.95cs

Extremely tricky maze game involving the player controlling two shields, and collecting masks through 15 mazes, which increase in complexity as you progress. Also in later stages, fish and chickens lie in wait, often blocking the masks and just waiting to fall on you and bring your quest to a premature end. Later still, things hot up as bombs, transporters and dolls conspire against you. Smooth scrolling, simple graphics, this one requires planning to complete successfully.

SPECIALS

Original works that are simply unclassifiable feature in this sec tion.

ATF
Digital Integration ● C64 £8.95cs £12.95dk ● Amstrad £8.95cs £12.95dk● Spectrum £8.95cs £13.95dk

Excellent combat/flight simulator that's a bit of a change for Digital Integration, the simulation specialist. The emphasis is on solid action, the result being a sure-fire hit.
★ ACE RATED 956 - SPECTRUM

DARK SIDE
Incentive ● C64 £9.95cs £14.95dk ● Amstrad £9.95cs £14.95dk● Spectrum £9.95cs £14.95dk

The second game using the Freescape programming system, which sets more of an arcade challenge. The 3-D graphics are again superb as are the tasks and puzzles.
★ ACE RATED 915 - AMSTRAD

ELITE
Firebird ● C64 £14.95cs £17.95dk ● Amstrad £12.95cs £14.95dk● Spectrum £14.95cs ● BBC £13.95cs £14.95dk (available from Superior software)

Still the best space trading game, Elite set a standard for other companies to follow. One of the first space games to use vector graphics, it's a shooting and trading effort set across several galaxies, with plenty of variety to the game play. You can trade legal goods in (relatively) safe systems, or run the gauntlet of pirates in the galaxies' danger spots with your hold full of contraband. Either way there's a nice line in zero-G dogfighting, and as big a task as you'll find anywhere.
★ ACE CLASSIC

INCREDIBLE SHRINKING SPHERE
Electric Dreams ● C64 £8.99cs £14.99dk ● Amstrad £9.99cs £14.99dk ● Spectrum £9.99cs £14.99dk ● Atari ST £19.99dk ● Amiga £24.99dk

A manic maze world where mass, size and inertia combine to provide wicked gameplay. Tricky puzzles and endless nasty obstacles will have you rolling around in delight.
★ ACE RATED 923 - C64

M1 TANK PLATOON
Microprose ● PC £39.99dk

This is a welcome break from flight-sims that boasts enough detail to keep even the most compulsive nitpicker happy, and at the same time has a breadth of challenge and combat scenarios that should satisfy the most ardent gamester. A winner.
★ ACE RATED 926

MAGNETRON
Firebird ● C64 £8.95cs £12.95dk ● Spectrum £8.95cs £12.95dk

Puzzles and action Steve Turner style. Save the world by dismantling eight satellites. Steal parts from enemy droids to upgrade your own droid and hopefully make your job a little easier. The ideal game for Quazatron fans looking for a similar, new challenge.
★ ACE RATED 904 - SPECTRUM

QUEDEX
Thalamus ● C64 £9.95cs £14.95dk

In this impressively challenging game you must steer a metallic ball through ten different screens of mazes, bonuses and obstacles, all within a set time limit. This simple game concept has a host of added features to make it particularly pleasing: you can carry over unused time to the next screen, for example, and tackle the different screens or 'planes' in any order you wish. Excellent graphics and utterly absorbing play.
★ ACE RATED 934 - C64

SPINDIZZY
Electric Dreams ● C64 £9.95cs £14.95dk ● Spectrum £9.95cs ● Amstrad £9.95cs £14.95 Disk

Tremendous stuff; steer your spinning top over tough obstacles and collect jewels, against a fiendish time limit. The game landscape is a vast system of catwalks, ramps, towers and trampolines surrounded by lethal drops - and NO safety rails. Floor switches activate lifts and bridge traps, but tripping them in the right order can be harder than it looks. A few bad guys and a lot of nice touches, but the explorations the thing.
★ ACE CLASSIC

STARGLIDER II
Rainbird ● Atari ST £24.95dk ● Amiga £24.99dk

One of the finest examples of a game using vector graphics to their full advantage, gets the solid 3D treatment and comes out looking every bit a winner. You've got a large task to complete and there's plenty of Egron's to destroy, making this combination of blasting and exploration that stands head above the competition.
★ ACE RATED 927 - ST

STAR TREK V
Mindscape ● PC £34.99dk ● MAC £34.99dk

This is easily the best interpretation of Star Trek yet. The gameplay provides absorbing and challenging hours of fun. A must for Trekkies and an entertaining space strategy /simulator for everyone else.
★ ACE RATED 930

TAU CETI/ ACADEMY
CRL ● C64 £9.95cs £14.95dk ● Amstrad £9.95cs £14.95dk ● Spectrum £9.95cs ● Atari ST £19.99dk ● Amiga £19.95

Flight simulator/shoot 'em up and its sequel which are both incredibly smooth and well put together. The attention to detail is impeccable as you set off on hair-raising missions as a space cadet. In Academy you get to design your own space skimmer craft as well.
★ ACE CLASSIC

TOTAL ECLIPSE
Incentive ● C64 £9.95cs £12.95dk ● Amstrad £9.95cs £12.95dk ● Spectrum £9.95cs £14.95dk

The third game using the Freescape system is a bit of a departure from the first two, but it's still an incredible game. In total eclipse you're battling against time back in the 1930's trying to prevent the moon exploding. For arcade adventurers who love puzzles, the Freescape system is a godsend.
★ ACE RATED 907 - AMSTRAD

WIZBALL
OCEAN ● C64 £8.95cs £14.95dk ● Amstrad £8.95cs $12.95dk ● Spectrum £8.95cs £14.95dk

Become Wizball and conquer the 'colour creatures' which are intent on eliminating the spectrum and rendering the landscape grey and drab. One of the most playable games around, despite the simple scenario.
ACE Classic

RPG

Role-playing games have exerted an enormous influence on modern game-styles. They combine the atmosphere of text adventures with the action of arcade games and the brain exercise of strategy – but their graphical presentatio tends to be weaker than other game genres. Gameplay centres around developing characters by raising their experience and skill levels in conflict with other, computer-controlled nasties. All that – and a quest too....

THE BARD'S TALE II

Electronic Arts, C64 £16.95, Amiga £24.95dk

The highly successful predecessor to Bards Tale III. BT II has the advantage of being slightly easier to advance. THe Amiga version features some very nice sampled monk chants when you enter a temple and excellently coloured graphics. And of course, you can update your favourite characters, their attributes and equipment for use in BT III.
★ ACE RATED 920

THE BARD'S TALE III

Electronic Arts ● C64 £14.95dk

The latest *Bard's Tale* game offers a number of refinements over its predecessors (all of which are still well worth taking a good look at). First, the graphics are better animated. Second, there are ranged combat routines which take careful account of the distance between you and your opponents. Finally, the game's large and represents excellent value for money.
★ ACE RATED 920

BATTLETECH

Infocom, PC £29.95, ST

Battletech features some incredible cartoon sequences, arcade style action, role play and strategy. In short a complete, full game. A brilliant RPG purchase even though it missed out on an Ace rating.
★ ACE RATED 801

DUNGEON MASTER

Electronic Arts ● C64 £14.95dk

Quoted as being a "milestone in Advanced Computer Entertainment", *Dungeon Master* offers 14 levels, loads of spells, atmospheric graphics and sound. All going to make *Dungeon Master* one of the best roleplaying adventures to have appeared on any machine.
★ ACE RATED 949

POOL OF RADIANCE

US GOLD /SSI ● C64 £14.99dk

SSI were very brave to attempt to capture the complex concept of the AD&D system on a computer, but they managed superbly. An RPG-influenced game that will appeal to not only AD&D fans but to anyone looking for an enthralling game that will keep them playing for months.
★ ACE RATED 921

ULTIMA V

OriginSystems/Microprose ● C64 £24.95dk ● PC £29.95 ● ST/Amiga to be announced

Astonishing level of detail in this role-playing influenced epic. Travel round Britannia trashing the opposition and learning the magical, tactical, and geographical secrets that will enable you to defeat the forces of evil far underground. Superb romp, great lasting interest, and tough challenges galore.
★ ACE RATED 928

WASTELAND

Electronic Arts ● C64 £14.95dk

Charge around irradiated USA whopping mutant bunnies and biker scum in this role-playing epic. The atmosphere may not be as good as the *Bard's Tale* series of games, but the extra dimension of strategy leaves the cut, slash and spell scenario of the *BT* series way behind.
★ ACE RATED 921

BRAIN GAMES

Fed up with mindless blasting? Want a game that offers you an opponent who's worthy of your skills? Then this is your section...

CHESS MASTER 2000

Electronic Arts ● C64 £9.95cs £14.95dk ● Amiga £24.95dk ● Atari ST £24.95dk ● IBM PC £24.95dk

Strongest chess game on the Amiga, with excellent graphics, 2D or 3D viewpoint, 12 levels of difficulty and all the playing options you could wish for. Plus some fairly nifty speech synthesis.
★ ACE CLASSIC

COLOSSUS CHESS 4

CDS ● C64 £9.95cs £14.95dk ● Amstrad £9.95cs £14.95dk● Spectrum £9.95

Best bet for 8-bit machine owners, with a choice of 2D or 3D view, umpteen levels of difficulty, and a myriad options which enable you to play, watch, work out chess problems, etc against a fine computer opponent.
★ ACE CLASSIC

COLOSSUS MAH JONG

CDS ● C64 £9.99cs £14.99dk ● Amstrad £9.99cs £14.99dk

Rummy-like oriental game of stratagy and chance. A tutor program and a short manual make this an easy to use and highly entertaining piece of software for veterans and novices alike..
★ ACE RATED 937 - C64

INFOGRAMES' BRIDGE

Infogrames ● Amstrad £12.95cs £15.95dk ● MSX £12.95

Graphically the best of all contract bridge simulations, with large playing cards depicted against a suitably green baize background. Plays a good game (for a computer, which after all is a bit short in the imangination and flair department), and features a wide range of options and bidding conventions which you can toggle of according to your style.
★ ACE CLASSIC

POWERPLAY

Arcana ● C64 £8.95cs £14.95dk ● Amstrad £8.95cs £14.95dk ● Amiga £19.95dk ● Atari ST £19.95dk

If you want to try out your general knowledge, we reckon you'd be better off with this original and challenging combination of strategy game and quiz than with the admittedly monster selling Trivial Pursuits. Powerplay is graphically very pretty in its setting on Mount Olympus, home of the Gods.
★ ACE RATED 935 - Amiga

SCRABBLE

Leisure Genius ● C64 £12.95cs £14.95dk ● Amstrad £9.95cs £14.95 ● IBM PC £24.95dk

The hugely popular word game translated very successfully onto the micro. Fast, excellent display, and a suprisingly large vocabulary (even if it does include some strange looking words on some occasions). Good enough to give even strong human opponents a tough game at the higher levels.
★ ACE CLASSIC

WAR GAMES

Fancy yourself as a master of grand strategy, marshalling hordes of troops and sending them of to do battle on your behalf? Look no further than the ACE war games section...

ARNHEM

CCS, Spectrum £8.95cs, Amstrad £9.95cs, C64 £9.95cs

One of the oldest quality wargames featured in the section, Arnham was easiloy the best in the field. It has all the expected atmosphere, five seperate scenarios and one of the toughest computer opponents you could ever wa't to meet. A thoroughly absobing wargame which can be classed as one of the old masters.
★ ACE RATED 910

CONFLICT EUROPE

Mirrorsoft, ST 24.99, Amiga £24.99, PC TBA

The 16 bit progression of Theatre Europe. Lots of extra graphical and sound effects. The computer controlled intelligence was marginally sophisticated but still enough to give a challenging game. The correct balance between strategy and exitement throughout. Great for beginners and intermediate players.
★ ACE RATED 882

THEATRE EUROPE

PSS, Spectrum £9.95cs, C64 £0.95cs £14.95dk, Amstrad £9.95cs £14.95dk

The perfect game for 8 bit owners who go green with envy when they look at Conflict Europe. Theatre Europe is the forerunner to the excellent 16 bit game. The graphics and overall play are not as sophisticated, but on the whole it still is one heck of a game.
★ ACE RATED 915

UMS

Rainbird, ST £24.95, PC £24.95, Macintosh £34.95, Amiga £24.95

Probably the greatest war game to date. UMS' uniqe 3D systems enables the creation of almost any battle in history. As well as a very sophisticated computer opponents yet. On top of this are add on scenarios and a very neat contruction kit to keep you going for even longer. An essential purchase
★ ACE RATED 907

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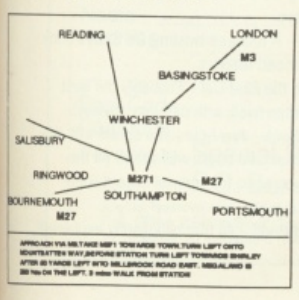

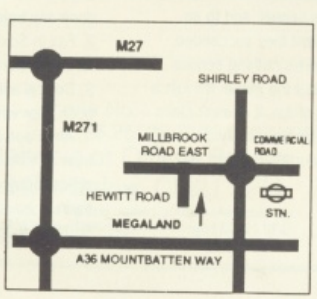

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Vector Grafix has spent a long time on this one – and it certainly shows. The game gets the balance just right between convincing simulation and entertaining game. Highly recommended.

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F-16 COMBAT PILOT

Digital Integration ● ST £24.95dk ● Amiga £24.95dk ● PC £24.95dk

This took nine person years to develop, and you can feel that quality of work when playing it – it's one of the most realistic flight sims on the market. If you are a connoisseur of flight simulators then this is an essential addition to your collection.

★ ACE RATED 970

FALCON

Spectrum Holobyte/Mirrorsoft ● ST £24.95dk ● Amiga £24.95dk ● PC £24.95dk ● MAC

If you really want the terror, exhilaration and sheer everything-happens-at-once confusion of combat flying, this game delivers. Make no mistake, this game is the real thing. An essential purchase for fast-jet fans.

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Sublogic ● C64 £39.95dk ● ST £49.95dk ● Amiga £49.95dk ● PC £49.95dk ● MAC £49.95dk

The flight sim that put the genre on to the map. Thoroughly realistic flight sim of a domestic Cessna plane, which is even used by flight schools to train would be pilots. Can be enhanced by a variety of Scenery Disks.

★ ACE CLASSIC

INTERCEPTOR

Electronic Arts ● Amiga £24.95dk

A low level flight sim with a hi-level of fun.Purists may dispute the label 'simulator' – it certainly wouldn't train you to fly a real life Hornet – but this program combines realism and gameplay far too well for that to matter. If you want seat-of-the-pants air combat action, miraculous graphics and NO six month training period, look no further!

★ ACE RATED 934

RACING SIMULATIONS

In You can't have too much of a good thing, even if the excitement is liable to giv ethe old ticker a good going over. Racing sims have really come into their own over the past couple of years – and this is where you find out how to get the best of motor raciong action – all from the comfort of that armchair in fromt of your computer....

LOMBARD RAC RALLY

Mandarin ● ST ● Amiga ● PC

Race through many types of terrain, such as mountain or forest, and through many types of weather condition, such as fog or night. The game has a nice atmosphere, and though the variety of gameplay may be a little low, it's still a game you'd be playing for a good while.

FERRARI FORMULA ONE

Electronic Arts ● ST £24.99dk ● Amiga £24.99dk ● PC £24.99dk

A bit old this one, but still a game that was way ahead of its time to start with. Take the wheel of a Formula One Ferrari racer on some of the most famous racecourses in the world. A true thoroughbred.

R.V.F.

Microstyle ● ST £24.99dk ● Amiga £24.99dk

The champion in the Best Sprite Based Racing Game stakes, and a superb simulation, this one puts you into the world of performance bike racing on none other than the Honda RVF750. Brilliant graphics, brilliant sound, brilliant game.

STUNT CAR RACER

Microstyle ● Spectrum £9.99cs £14.99dk ● C64 £9.99cs £14.99dk ● ST £24.99dk ● Amiga £24.99dk ● PC £24.99dk

This places itself in the annals of computer history as being one of the most amazing spectacles to watch, let alone play. The game is first-person perspective, with the outside world made up of really fast smooth filled vectors, and the impression of realism is unbelievable. An amazing experience, and a clear winner. Where can things go from here?

SUPER HANG ON

Electric Dreams ● Spectrum £9.99cs ● C64 £9.99cs £14.99dk ● Amstrad £9.99cs £14.99dk ● ST £24.99dk ● Amiga £24.99dk

Not so much a simulation as a perfect arcade conversion of a brilliant bike racing Sega coin-op. Great game, excellent conversion.

THE DUEL - TEST DRIVE II

Accolade ● C64 ● ST ● Amiga ● PC ● MAC

Accolade tried to right all the Test Drive wrongs with this sequel, and to an extent they succeeded. There's nothing serious about the game. It's just a lot of fun. It doesn't claim to be technically or visually accurate, but why should it?

THE BOOKS YOU HAVE TO HAVE!

If you ever find it possible to drag yourself away from your computer and watch the TV instead you might have seen a programme on BBC last month about computer junkies – those people who just can't get enough of their micros and are quite happy to burn the midnight oil just to be with them. The program suggested that such activities might be unhealthy (could it be true?). Never being a magazine to promote ill health ACE has decided to back a sensible, adult activity, namely READING. So here goes with the books you have to have:

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2. *Fox in Sox* – A toungue twisting Dr. Seuss book for more advanced readers.
3. *Dougal and the Blue Cat* – Probably the best book ever written (well, with pictures anyway).
4. *Any Pooh Book* – Any hours you spend with the bear of little brain are hours well-spent. All the philospophy you need for survival is contained herin.
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ACE DIARY

ALL THOSE IMPORTANT DATES, RELEASES, AND BIRTHDAYS FOR FEBRUARY/MARCH.

DON'T FORGET: IF YOU'VE GOT AN EVENT YOU WANT TO SEE PUBLICISED IN THE DIARY, LET US KNOW!

FEBRUARY

WEEK ONE

10 SATURDAY
All Formats Computer Fair, New Horticultural Hall, London SW1 (bargains and cut-price software).

11 SUNDAY

12 MONDAY

13 TUESDAY
Chuck Yeager, first man to fly faster than the speed of sound, born this day in 1923. Licensed his name to Electronic Arts' *Chuck Yeager Advanced Flight Trainer* - a supersonic flight sim.

14 WEDNESDAY
St Valentine's Day. The original St Valentine lived in the fourth century and there is nothing in his life history, or in the legends surrounding him to suggest why he might have inspired the practice of sending Valentines, which are more likely to have originated as an ancient pagan practice.

15 THURSDAY
Anniversary of the introduction of decimal currency, in 1971.

16 FRIDAY
Birthday of John McEnroe, 1959.

17 SATURDAY
Birthday of Barry Humphries, or should that be Dame Edna Everage, 1934.

WEEK'S RELEASES AT A GLANCE

Firebird: ***P47*** - Thunderbolt (Amiga, ST) Second World War air combat action, from the Jaleco coin-op.
Star Wars Trilogy (PC compatibles) Compilation featuring the three Star Wars arcade games.
Mindscape: ***Gin & Cribbage*** (Amiga)
Rainbird: ***Midwinter*** (PC compatibles) Mike Singleton's latest, a tale of strategy and confrontation in the new Ice Age.

18 SUNDAY
National Day, Nepal Independence Day, Gambia Birthday of Bobby Robson, 1933

19 MONDAY
President's Day, USA

20 TUESDAY

21 WEDNESDAY
Feast Day of St Peter Damian, renowned for his severity. Known for reprimanding one bishop because he was indulging in that most frivolous of activities - chess.

22 THURSDAY

23 FRIDAY

24 SATURDAY

WEEK'S RELEASES AT A GLANCE

Impressions: ***Renaissance*** (Amiga, ST)
Rainbird: ***Tower of Babel*** (Amiga) ACE rated at 930 last month, arcade puzzle game by Pete "Tau Ceti" Cooke.
Weird Dreams (C64 tape and disk) Explore your nightmares in this arcade adventure.
Domark: ***Hard Drivin'*** (Archimedes) 3D racer featuring speed and stunt tracks (including the infamous loop the loop) translated onto the super-fast, super-smooth Arc.

25 SUNDAY
National Day, Kuwait; Feast Day of St Ethelbert of Kent, the king who built the first St Paul's cathedral in London.

26 MONDAY

27 TUESDAY
Shrove Tuesday. Pancake time, everyone.

28 WEDNESDAY
Ash Wednesday - beginning of Lent; Birthday of Barry McGuigan, one-time world flyweight boxing champion and of *Barry McGuigan's Boxing* (Activision) fame, 1961.

MARCH

1 THURSDAY
St David's Day

2 FRIDAY

3 SATURDAY
Anniversary of the Throne (National Day), Morocco

WEEK'S RELEASES AT A GLANCE

Cinemaware: Amiga (1Mb only); ***Ant Heads*** (*It Came From the Desert* data disk). Sequel to the acclaimed B-movie inspired Cinemaware title. The ants are back in all their plutonium-distorted glory. Requires the original disk and a 1Mb Amiga to operate.
Mindscape: ***TV Sports Basketball***. Basketball action simulation.
Firebird: ***P47 - Thunderbolt*** (Spectrum, C64, CPC) Second World War air combat action, from the Jaleco coin-op.

4 SUNDAY
Birthday of Kenny Dalglish, 1951

5 MONDAY

6 TUESDAY
Independence Day, Ghana; Daily Mail Ideal Home Exhibition opens (continues until April 1)

7 WEDNESDAY

8 THURSDAY

9 FRIDAY

10 SATURDAY

WEEK'S RELEASES AT A GLANCE

Electronic Arts: ***Powerdrome*** (PC compatibles) Futuristic racing game set in an outer galaxy.
Domark: ***Hard Drivin' Extra Tracks*** (Amiga) More stunts, more twists and turns in this Hard Drivin's accessory disk.
Rainbird: ***Weird Dreams*** (PC) Arcade-adventure in the relams of the subconscious.
Tower of Babel (ST) Hard to define puzzle game, with an ACE rating of 930.
Midwinter (ST) Mike Singleton's latest, a tale of strategy and confrontation in the new Ice Age.

GET YOURSELF IN THE DIARY!

Whether you're a software house with a launch or a charity with a lunch: let us know and we'll put you in the ACE diary. Write to the ACE Diary, 30-32 Farringdon Lane, London, EC1R 3AU.

Print deadlines: the second Thursday in every month for the issue on the shelves in the following month.

PREMIER MAIL ORDER

8 BIT TITLES

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CASS DISC					
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Altered Beast	6.99		6.99	9.99	6.99	9.99
APB	6.99	9.99	6.99	9.99	6.99	9.99
Bards Tale	2.99		2.99	5.99	2.99	
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Batman The Movie	6.99	9.99	6.99	9.99	6.99	9.99
Battlechess				10.99		
*Beach Volley	6.50	9.99	6.99	9.99	6.99	9.99
Bomber	10.99	13.99	10.99	13.99	10.99	13.99
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Cabal	6.50	9.99	6.99	9.99	6.99	9.99
Carrier Command	9.99	13.99	9.99	13.99		13.99
Carriers at War				14.99		
Chase HQ	6.99	9.99	6.99	9.99	6.99	9.99
Continental Circus	6.99	9.99	6.99	9.99	6.99	9.99
Crazy Cars 2	6.50				6.50	9.99
Cricket Master	6.50		6.50		6.50	
Curse of Azure Bands				16.99		
*Cyberball	6.99	9.99	6.99	9.99	6.99	9.99
Double Dragon 2	6.99	9.99	6.99	9.99	6.99	9.99
Dragon Spirit	6.99	9.99	6.99	9.99	6.99	9.99
Dragon Ninja	6.50	9.99	6.99	9.99	6.99	9.99
Dynamite Dux	6.99		6.99	9.99	6.99	9.99
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THE ACE STOCK MARKET

THIS MONTH WE INTRODUCE SOME MAJOR IMPROVEMENTS TO THE STOCKMARKET LISTINGS, DESIGNED TO MAKE THEM EASIER TO USE AND EVEN MORE INFORMATIVE. AND DON'T FORGET: YOU CAN WIN A PRIZE IF YOU CAN PREDICT NEXT MONTH'S TOP GAMES AND SOFTWARE HOUSES.

This is the fourth time the ACE Stockmarket has been published, and we've made some big changes.

But first, are you **confused?** Well, sit down and **relax**...because it's all very simple. Here's a brief explanation for everyone who's still chewing their fingernails off. It's in two parts, first, how the Stockmarket works, and second, how you can win prizes.

HOW IT WORKS

Each month, ACE researchers read EVERY major British computing magazine. They note down ALL the review ratings for the games reviewed that month, together with the name of the software house, the machine the game runs on, and the name of the magazine the review appears in.

They then feed this information into a spreadsheet and calculate the data that makes up the charts you see on these pages (called 'Counters', because this is a market, right?).

There are three counters that deal with games. First, there's the MACHINE COUNTER. This tells you which games have been getting the highest review marks for each machine.

Remember – unlike other charts, this one is based on reviews, not on sales figures. This makes it much more useful to you, since you can see at a glance which games are likely to be the best buys for your machine. Of course, in an ideal world, the games that the get the best reviews should get the most sales, but (for various commercial reasons) this doesn't happen and as a result charts based on sales are NOT a good guide to what you should buy – they're just a guide to what the shops are selling.

In addition to the Machine Counter, there's also the two processor counters, which simply show you which are the best reviewed 16-bit games and the best 8-bit ones. You can draw some interesting conclusions about 8-bit and 16-bit games by comparing these two charts.

Finally, there's the COMPANY COUNTER. This one is a little more complicated, but still it's really pretty basic stuff....

The aim of the Company Counter is to tell you which software houses are currently producing the most successful titles. Each company has a THIS MONTH rating, which is calculated according to the reviews its games have received during the current month. A company whose games are all rated highly will have a high THIS MONTH score.

The next rating in the company counter is the SHARE PRICE. This simply tells you how well a company is doing relative to its past performance. If a company gets worse reviews this month than last month, its price will drop. If it gets better reviews, the price rises. Companies who get no reviews at all have their price decreased each month until they get reviewed again.

Associated with the share price is the +/- rating, which simply tells you how much that company's share price has risen or fallen this month.

Finally, there's the company's INDEX RATING. This shows how well a company's games have done this month *compared to the average score gained by all the other games reviewed.* It's this rating that determines the position of a company in the charts. The average score for ALL games reviewed each month is called the SOFTWARE INDEX and it's printed at the top of the Company Counter.

In other words, if a company's Index rating shows a + figure, that's because its games have scored higher than the industry average during the current month. A minus figure shows that its games have scored less well than the average.

That's all there is to it. Now all you need to know is how to win prizes: you can find out on page 106, as well as seeing some of this mon-

NOW IT'S EVEN EASIER TO WIN!

Yup, you now only need to fill in your predictions for the top **three** entries in each chart (it used to be five). And you don't even have to get them all right to stand a chance of winning. See page 106 for details. The entry form is on page 112.

THE COMPANY COUNTER

To get into the share price listing, companies need to be releasing products reviewed by magazines. To see their fortunes rise, they need to be consistently improving their product. In the short term, the 'one-hit wonder' will seem to do well; in the longer term, consistency will pay off.

Companies rating 100 and marked * are 'new entries'. They haven't featured in the Company Counter before, and a company's launch share price is always 100. Companies with an existing share price, but who have no review ratings at all in a particular month, will lose ten points from their share price for each month that no reviews appear.

This month, we also see the first appearance of the Software Index. This charts the performance of a company's titles relative to the Software Index rating. This figure is an overall average mark for all the reviews given in the previous month. The Software Index shows how many marks above or below the average rating each company's titles rated.

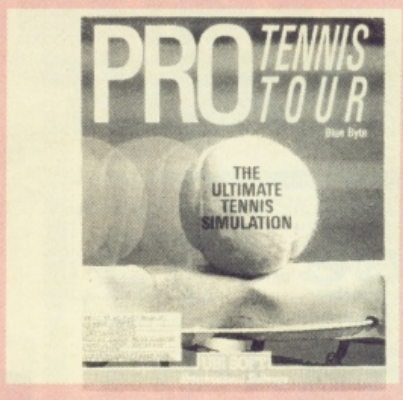
THIS MONTH'S SOFTWARE INDEX RATING:
71.58

Origin's leap to the top of the ratings comes from an enthusiastic reception to a pair of Commodore 64 titles - not an area the company is best known in. New placings on the Stock Market this month include Dynamix and FTL - Chaos Strikes Back appears to be living up to expectations. They'll find that life is tough at the top...

Publisher	This month	+ or -	Index	Rating
Origin	97.5	n/a	121.97	25.92
Dynamix	96.5	n/a	100*	24.92
FTL	92.83	n/a	100*	21.25
Delphine/Palace	89.5	+4.25	104.99	17.92
Beau Jolly	85	n/a	98.46	13.42
CP Software	85	n/a	100*	13.42
Blade	84.75	+5.08	106.38	13.17
Cinemaware	84.14	-7.74	91.58	12.56
Pandora	83.5	n/a	100*	11.92
Sierra On-Line	81.5	n/a	100*	9.92
Empire	81.25	n/a	100*	9.67
Ocean	81.07	-5.97	93.14	9.49
Innerprise	80.67	n/a	100*	9.09
Electronic Arts	80.42	-0.07	99.91	8.84
Hit Squad	78.96	+13.71	121.01	7.38
Microprose	78.33	-4.5	94.57	6.75
Micro Style	77.83	+3.71	105.01	6.25
US Gold	76.73	+0.13	100.17	5.15
Rainbow Arts	76.18	+7.53	110.97	4.6
Firebird	76	+0.34	100.45	4.42
Psyclapse	75.59	n/a	100*	4.01
Screen 7	75	n/a	100*	3.42
UbiSoft	74.64	+10.09	115.63	3.06
Virgin	74.26	-0.08	99.89	2.68
Activision	73.93	+3.46	104.91	2.35

Rainbird	73.83	-7.73	90.52	2.25
Gremlin	72.22	-3.01	96	0.64
Mindscape	71.9	-8.51	89.42	0.32
Domark	71.44	-0.23	99.68	-0.14
SSI/US Gold	71.33	+7.5	111.75	-0.25
Addictive	71.2	n/a	100*	-0.38
Anco	70.67	-2.12	97.09	-0.91
SubLogic	70	n/a	100*	-1.58
Accolade	69.21	-8.84	88.67	-2.37
Epyx/US Gold	69	n/a	84.01	-2.58
Code Masters	68.13	n/a	100*	-3.45
Mastertronic	67.3	n/a	106.83	-4.28
Infogrames	67.24	-6.73	90.9	-4.34
Psygnosis	67	-4.33	93.93	-4.58
Grand Slam	66.75	n/a	116.43	-4.83
Readysoft	66.75	n/a	100*	-4.83
Wicked	65.5	n/a	103.56	-6.08
Elite	65.33	-4.44	93.64	-6.25
Digitek	65	n/a	100*	-6.58
Leisure Genius	65	n/a	100*	-6.58
Smash 16	65	-15	81.25	-6.58
Hewson	64.54	-4.96	92.86	-7.04
16-Blitz	64.33	+26.33	169.29	-7.25
Edge	64.19	-2.56	96.16	-7.39
Logotron	63.75	-5.45	92.12	-7.83
Tynesoft	62.31	n/a	100*	-9.27
Players Premier	61.54	+19.87	147.68	-10.04
Players	61	n/a	100*	-10.58
Titus	60.06	n/a	100*	-11.52
Magic Bytes	60	n/a	100*	-11.58
ARC	58.5	n/a	100*	-13.08
Kixx	58	+1	101.75	-13.58
Encore	56.9	+9.59	120.27	-14.68
Starbyte	56.67	n/a	100*	-14.91
CDS	55.5	-7.97	87.44	-16.08
Alternative	55.06	+7.06	114.71	-16.52
Actl Screenshots	45.75	n/a	64.89	-25.83
Artronic		n/a	47.41	n/a
Bethesda		n/a	80	n/a
Byte Back		n/a	74.37	n/a
Digital Int'n		n/a	85.6	n/a
Dinamic		n/a	116.72	n/a
Gainstar		n/a	91.97	n/a
Image Works		n/a	89.53	n/a
Impressions		n/a	79.78	n/a
Infocom		n/a	65.21	n/a
Level 9		n/a	83.91	n/a
MicroIllusions		n/a	87.41	n/a
Novagen		n/a	80	n/a
PSS		n/a	46.7	n/a
RAD		n/a	101.82	n/a
Reline		n/a	100.5	n/a
Shades (G'Slam)		n/a	80	n/a
System 3		n/a	92.9	n/a
Thalamus		n/a	77.05	n/a

***Pro-Tennis* from Ubisoft has done well in ACE this month. How will it affect the charts next month? Watch out for Microprose's *Midwinter*, too – it's bound to have a major impact on that company's position on the Company Counter and in the machine charts.**



THE MACHINE COUNTER

AMIGA RATINGS

Operation Thunderbolt	Ocean	93.47
Drakkhen	Infogrames	91.67
Stunt Car Racer	Micro Style	88.75
It Came From the Desert	Cinemaware	88.01
Future Wars	Delphine/Palace	87.75

Ocean had last month's highest rated game with *F29 Retaliator*; this month, *Operation Thunderbolt* takes over the top slot. *Stunt Car Racer* and *It Came from the Desert* continue to attract high scores.

COMMODORE 64 RATINGS

Ghouls'n'Ghosts	US Gold	87.38
Turbo Outrun	US Gold	86.10
Bushido	Firebird	78.48
Sim City	Infogrames	74.5
Eye of Horus	Logotron	68.25

It was a poor month for C64 releases - in terms of quality rather than quantity, with only the two US Gold titles consistently scoring over 80. Interesting to note that while the C64 definitely had the best version of *Turbo Outrun*, it was the poorest format for Ocean's rival driving game, *Chase HQ*.

AMSTRAD CPC RATINGS

Ghostbusters II	Activision	86.5
Scapeghost	Level 9	86.5
Operation Thunderbolt	Ocean	83.09
Hard Drivin'	Domark	82.5
War Machine	Players Premier	82

Ghostbusters II hangs onto the top slot, demonstrating that the early reviews caught the essence of the game - on this format, anyway. Scapeghost must be pleasing Level 9 – the Amstrad was always a strong machine for graphical adventures.

ATARI ST RATINGS

Chaos Strikes Back	FTL	92.83
Tower of Babel	Rainbird	91.5
Future Wars	Delphine/Palace	87
Stunt Car Racer	Micro Style	87
Ghouls'n'Ghosts	US Gold	84.53

There were high expectations of *Chaos Strikes Back* and the verdict is that it doesn't disappoint. Rainbird too can usually be relied on to produce quality releases and while *Weird Dreams* hasn't set the world alight, *Tower of Babel* has been very highly rated.

PC-COMPATIBLE RATINGS

Indianapolis 500	Electronic Arts	91.09
Their Finest Hour	US Gold	87
Die Hard	Activision	85.5
Neuromancer	Electronic Arts	85
Populous	Electronic Arts	83.5

The poor PC turn-out last month may just have been a glitch; PC owners have something to spend their money on this time. Electronic Arts is threatening to dominate this chart; especially as it has plenty more PC programs to release this spring.

SPECTRUM RATINGS

Chase HQ	Ocean	
Ghouls'n'Ghosts	US Gold	88.67
Hard Drivin'	Domark	87.85
Super Wonder Boy	Activision	86.25
Operation Thunderbolt	Ocean	85.88

Chase HQ may have been received poorly on the Commodore 64, but by common consent, it's the best Spectrum game around (it scored over 90 points last month as well).

THE 16-BIT COUNTER

The follow-up to *Dungeon Master* goes straight in at number one on one format alone, while Blade's *Laser Squad* is consistently well-received over all three formats.

Chaos Strikes Back	FTL	ST	92.83
North and South	Infogrames	Amiga, ST	91.5
Laser Squad	Blade	Amiga, PC, ST	90
Operation Thunderbolt	Ocean	Amiga	89.94
Stunt Car Racer	Micro Style	Amiga, ST	89.5
Future Wars	Delphine/Palace	Amiga, ST	89.5
Drakkhen	Infogrames	Amiga, ST	87.34
X-Out	Rainbow Arts	Amiga	86.7
Ghouls'n'Ghosts	US Gold	Amiga, ST	86.24
Indianapolis 500	Electronic Arts	PC	86.17

Bubbling under: *Batman - the Movie*, *Maniac Mansion*, *It Came From the Desert* and *Battle Squadron*

THE 8-BIT COUNTER

There are some great value budget games around at the moment, with four titles here at ú2.99 rated at over 80%. Ocean's Operation Thunderbolt is proving a huge success on all formats.

Great Escape	Hit Squad	C64, Sp	89.33
Dizzy III: Fantasy World	Code Masters	CPC, Sp	88.25
Operation Thunderbolt	Ocean	CPC, Sp	86.21
Renegade	Hit Squad	CPC, C64, Sp	84
Untouchables	Ocean	CPC, C64	83
Hard Drivin'	Domark	CPC, Sp	83.75
Sailing	Mastertronic	CPC, C64, Sp	81.67
Ping Pong	Hit Squad	CPC, C64, Sp	78.44
Ghouls'n'Ghosts	US Gold	CPC, C64, Sp	77
Turbo Outrun	US Gold	CPC, C64, Sp	77.2

Bubbling under: *Toobin'*, *Dan Dare III*, and *Footballer of The Year II*.

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Ghouls and Ghosts	18.99	—	14.99
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NOTE : At time of going to Press all stocks of 520 ST are the STE version, including PCM stereo sound and enhanced graphics!

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HOW TO WIN the ACE Stockmarket.

So you want to get your hands on some of those Stockmarket prizes, eh? Or possibly even the £150 jackpot? Here are a few tips...

First, the prizes themselves. There are seven prizes available each month. These go to the seven readers who get CLOSEST (you don't have to get them exactly right) to predicting the top three games in the correct order in each of the six machine categories (CPC, Amiga, ST, C64, PC, Spectrum) and the top three software houses (again in the correcto order) on the Company Counter.

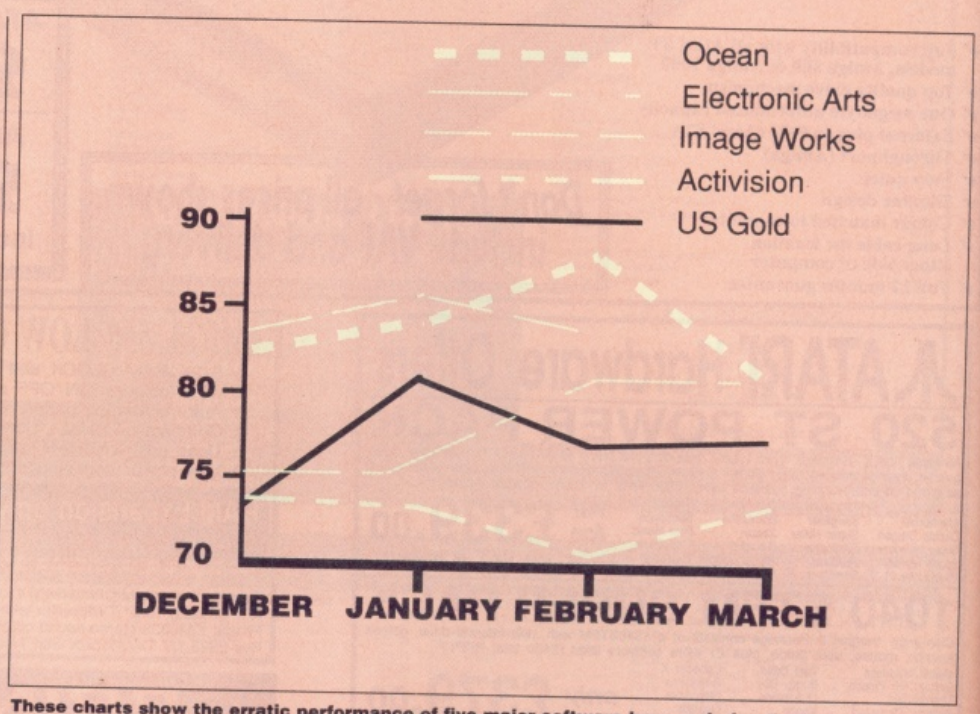
Remember – you don't have to get them exactly right to win a prize, you just have to be the closest. If, however, you get all three right and in the correct order, you stand to win the jackpot prize of £150 worth of software. Any draws are decided by pulling the tied entries out a hat.

Of course, predicting next month's positions isn't easy. However, if you're keen on games, you'll stand good chance. For example, last month it was a reasonable bet that FTL's Chaos Strikes Back would be reviewed this month and get high ratings. Straightaway you've got one potential entry for the top five. Looking ahead to next month, (and we'll give you a tip here) most magazines will be covering Mike Singleton's Midwinter, which again is bound to get high marks. Will they be high enough to push it into the top three? Time will tell...

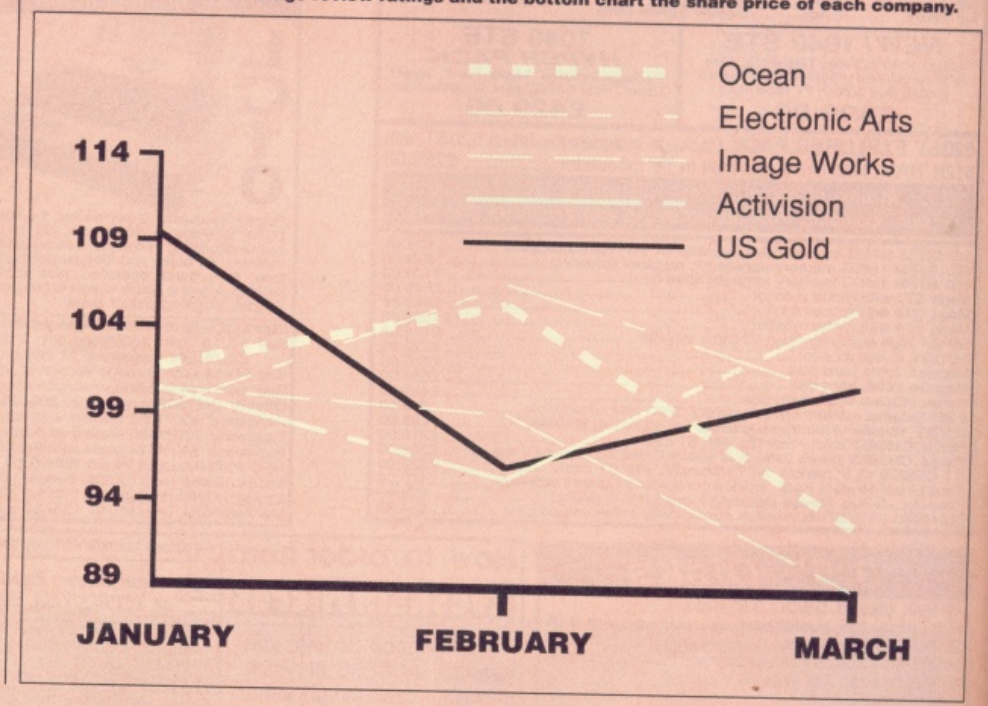
Of course, if you're really keen, you can try analysing the performance of companies by looking back over past issues of the Stockmarket and trying to pinpoint patterns. However, we've tried this ourselves (see the tables on this page) and if one thing stands out clearly, it's that there are NO easy to perceive patterns. The best way to win a prize is not to get involved in all sorts of complicated calculation, but simply to find out which games you think are likely to be released and reviewed in the following month and then draw up your predictions accordingly.

Just a word about deadlines. The ACE Stockmarket figures are compiled during the two weeks following the first Thursday of each month and appear in the issue that comes out on the first Thursday of the *following* month. So this month's figures were put together between 4th and the 18th of January.

So get to it: the form's on page 112.



These charts show the erratic performance of five major software houses during the last few months. The top chart shows average review ratings and the bottom chart the share price of each company.



ACE DEALERS

WE KNOW HOW IT IS – YOU'VE SPENT MOST OF YOUR HARD EARNED DOSH OVER CHRISTMAS AND THE NEW YEAR, AND NOW ALL THERE IS LEFT TO DO IS HUDDLE ROUND A CANDLE LOOKING MISERABLE. OF COURSE THE OCCASIONALCHUNK OF DRIED BREAD AND CUP OF DIRTY RAINWATER ARE NO CONSOLATION – YOU'D MUCH RATHER HAVE THE LATEST SOFTWARE SENSATION INSTEAD. SO HOW DO YOU FIND THAT UNIMISSABLE BARGAIN OR SPECIAL OFFER? LOOK NO FURTHER THAN THE *ACE* DEALERS PAGE OF COURSE...

ACE - GREAT DEALS

Many retailers are trying to have a breather this month, following the Christmas rush and the January sales. There are fewer games being released, and the next big batch of promotions and competitions will probably take place round about Easter time.

VIRGIN SALE

Despite the lull, the **Virgin Games Centre** sale continues until the middle of this month, with a whole host of **special offers**, so pop in to see what they have on offer. Once the sale stock has been cleared away, Virgin hopes to have a **special promotion** set up with **Microprose** – no details available as *ACE* went to press, I'm afraid, but it should be worth investigation.

FREE FERRARIS!

Accolade's model Ferrari promotion, linked to *Test Drive II – The Duel*, continues, with the **Northern Computer Shop** chain offering a **Matchbox model** car with every copy of the game. All names go into the **prize draw** for a **Burago model** of a **1987 Ferrari F40** mounted on a wooden plinth, complete with moving parts.

SOMEWHEREOVER THE RAINBOW

Computer Shops are also working on some forthcoming **special offers** with the long-awaited *Rainbow Islands* (now being released by **Ocean**) and **Pandora's** *Xenomorph*. Check with your local **Computer Shop** branch (locations below) for details.

T-SHIRTS AND DRAWS

Buyers in **Birmingham** and **Newcastle** should drop into their local branch of **Microbyte** on **Saturday, February 17**. Spend over **£15** on any **Ocean** titles in **Birmingham** on that day, and you'll get a **T-shirt and poster** to go with the game. Plus **your name** will go into a **draw** with **mystery prizes** available to be won.

BUDGET DAY

In **Microbyte Newcastle**, **February 17** is a special **budget buyers' day**. With any full price purchase you can also buy **any 8-bit budget game** for just **£1**. A remote-controlled **model car** is also up for grabs in a **one-day competition**.

ACE DISCOUNT

Microbyte is also offering **readers** of this page a **10% discount** on goods bought at any of its stores, provided you present the **voucher** below when you make your purchase. Happy bargain hunting!

WHERE IT'S AT...

You can find **Computer Shop outlets** in the Arndale Centre, **Manchester**; **Newcastle**, **Leeds**, **Preston**, **Sunderland**, **Stockton** and **Nottingham**. Also part of the **Computer Shop chain** are the two **Games Store outlets** in **Carlisle** and **Middlesbrough**, which stock **role-playing games** as well as **computer software**.

There are **Microbyte stores** in the Arndale Centre, **Manchester**; the Broadmarsh Centre, **Nottingham**; Kirkgate, **Wakefield**; the Metro Centre, **Gateshead**; the Greenmarket, **Newcastle Upon Tyne**; the Kirkgate Centre, **Bradford**; the Bull Ring Centre, **Birmingham**; and the County Arcade, **Leeds**.

Virgin has its **Games Centre outlets** on **London's Oxford Street** (at Marble Arch, within the Megastore, and at no 100) and Bristol, and also in Megastores in **Birmingham**, **Brighton**, **Dublin**, **Edinburgh**, **Glasgow** (at Union St and Argyle St), **Leeds**, and **Nottingham**. One of these must be **near you**!

All offers and promotions are subject to availability of stock. Although we do our best to ensure our dealer promotion information is accurate at the time of going to press, *ACE* cannot take any responsibility for changes or cancellations to dealers' plans.

FREE PUBLICITY!

Attention dealers! Don't keep your promotions, competitions, special offers, etc, a secret. Tell us at *ACE* and we'll tell everybody else.

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NOTE: THIS VOUCHER CAN BE USED ONLY ONCE!

PINK PUZZLERS

PUZZLE RESULTS

First off some results and solutions. The winner of Prize Puzzle 16 was **Chi Chiu Cheung**, St. Anns, Nottm. £10 will shortly be winging its way to you, Chi. Puzzle 17 never happened (oops!), but **Mr. K. A. Siddiqui** of Chiswick, London, also receives £10 for winning Prize Puzzle 18.

Next month we'll bring you the solutions and prizewinners for the Jan '90 Prize Puzzle, and the Feb'90 Prize Crossword.

And finally, here was a P.S. found on a competition entry from **Anne--Mirjam Maczewski** of Hildesheim, West Germany: "Why don't you make your forms so small that they can fit on a postcard? It would cost me about 15p less!"

Well Anne, the short answer is that we really don't mind if you put your competition answers on a postcard rather than the standard form. As long as you give us all the information that is requested on the form, and as long as it's clear, there is no problem for us. Obviously if the form contains a diagram like a Crossword Grid then you'll have to return the whole form (unless of course you want to copy it out in miniature on your postcard (only joking – please don't)!

SOLUTION TO PUZZLE 19

The multiplication was:

```
   9852
   2934
  39408
 29556
 88668
19704
28905768
```

The problem involved finding two four-digit numbers which produced a long multiplication which had the digits 2 to 8 running diagonally downwards from the top right-hand corner. In addition, each of the four sub-products (lines 3 to 7 of the multipliaction) comprised five digits.

Because the digits '2' and '3' in the top two lines are 'fixed' it is only necessary to consider the remaining three digits in each of these lines. In the program this is done in lines 100 and 120, the known digits being inserted into the correct positions by means of the two string variables A$ and B$.

The four sub-products are generated from these two values and are stored in the strings C$ to F$ in turn. As each is computed it is tested to ensure that it has a length of five characters, the third character in each case agreeing with the known digits on these lines of the sum.

Finally, the full product is calculated (line 260) and is tested for the presence of the digit '8' in second place.

```
100  FOR A=100 TO 999:A$=STR$(A)
110  A$=A$+"2"
120  FOR B=100 TO 999:B$=STR$(B)
130  B$=LEFT$(B$,2)+"3"+RIGHT$(B$,1)
140  C$=STR$(VAL(A$)*VAL(MID$(B$,4,1)))
150  IF LEN(C$)<>5 THEN 300
160  IF MID$(C$,3,1)<>"4" THEN 300
170  D$=STR$(VAL(A$)*VAL(MID$(B$,3,1)))
180  IF LEN(D$)<>5 THEN 300
190  IF MID$(D$,3,1)<>"5" THEN 300
200  E$=STR$(VAL(A$)*VAL(MID$(B$,2,1)))
210  IF LEN(E$)<>5 THEN 300
220  IF MID$(E$,3,1)<>"6" THEN 300
230  F$=STR$(VAL(A$)*VAL(MID$(B$,1,1)))
240  IF LEN(F$)<>5 THEN 300
250  IF MID$(F$,3,1)<>"7" THEN 300
260  G$=STR$(VAL(A$)*VAL(B$)
270  IF LEN(G$)<>8 THEN 300
280  IF MID$(G$,2,1)<>"8" THEN 300
290  PRINT A$;" ";B$
300  NEXT B
310  NEXT A
```

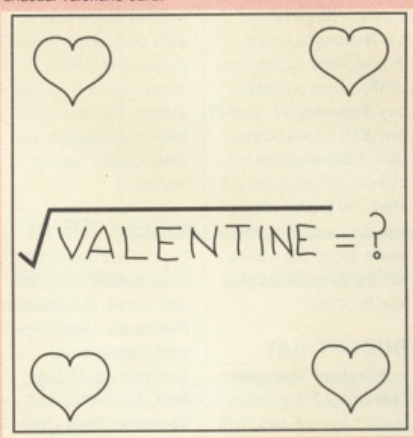
The winner is **Osman Liyan**, Kettering, Northants

MARCH '90 PRIZE PUZZLE

Set by Archie Medes

The cover date of this issue is March, but if you were quick enough to the newsagent you should have managed to obtain your copy in time for Valentine's Day. So here's a puzzler in the spirit of things:

Last year, on February 14th, I received the following unusual Valentine card.



Enclosed within the card were the following instructions:

Can you find the square root of Valentine? To do so, simply substitute each of the letters in the word 'Valentine' for a digit – a different digit for each differing letter, the same digit where any letter is repeated. If you have done this correctly the square root of this value will be a whole number. There is only one possible solution provided that you replace the 'E' with a...

Unfortunately, in the intervening twelve months I've forgotten just which of the digits was represented by 'E'. But, even so, you should still be able to solve this puzzle.

SOLUTION TO PUZZLE 20

Henry bought:

2 cassette players at £15.99 each	£31.98
2 teddy bears at £8.85 each	£17.70
1 game at £21.73	£21.73
1 Christmas hamper at £17.59	£17.59
and 1 shirt & tie set at £11.00	£11.00
Total:	£100.00

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```
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70   SHIRT=1100
100  FOR P=0 to 10000/PLAYER
110  FOR T=0 to 10000/TEDDY
120  FOR D=0 to 10000/DISC
130  FOR G=0 to 10000/GAME
140  FOR B=0 to 10000/BOTTLE
150  FOR H=0 to 10000/HAMPER
160  FOR S=1 to 10000/SHIRT
170  Z = P*PLAYER + T*TEDDY + D*DISC +
     G*GAME+B*BOTTLE+H*HAMPER+S*SHIRT
180  IF Z=10000 THEN PRINT P;" ";T;" ";D;
     " ";G;" ";B;" ";H;" ";S
190  NEXT:NEXT:NEXT:NEXT:NEXT:NEXT:NEXT
200  END
```

The winner is **David Wood**, Cleethorpes, Sth Humberside.

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PINK PREZZIES

BANK ON ANCO

Here it is, the moment you've all been holding your breath for: the result of our competition celebrating the launch of Anco's footie game, *Player Manager*, the successor to the outstanding *Kick Off* (which, incidentally, seems to be rapidly becoming EMAP's most played game – I can't get the ad team out of the review room once they get started!)

Anyway, the lucky winner of the Sony CCDF250 Camcorder is **Alex Eddleston**, Blackburn, Lancs. In addition, **Ralph Burton**, Oberriedon, Switzerland, will be receiving a Liverpool shirt, and **James Tinston**, Wirral, Merseyside, a copy of the *Player Manager* game.

GOTTA HAND IT TO YA!

And now, another knee trembler – the winner of the brand spanking new Atari Lynx hand held console. The incredibly lucky (likely to be mobbed) person is... wait for it... **Mr. Richard Hall**, Thames Ditton, Surrey.

THE INQUISITION

Thanks for the great response to our *20 Questions* readers survey in the November '89 issue. The results were quite revelationary and we will be using them to tailor the magazine to meet your requirements. As a mark of gratitude, the following three people have received games for their machines: **Mr.G.Shufflebotham**, Worksop, Notts.; **Joe Beatties**, Carrickfergus, Co. Antrim; **R.A.Rostron**, Blackburn, Lancs.

COMPUTER BUGGIES

The following ten people are the lucky winners of buggy car kits being given away by Digital Magic Software to celebrate their forthcoming game *Drivin' Force*: **Steve E. Button**, Whitchurch, Bristol; **John King**, Broadstairs, Kent; **Tom Mead**, Hackney London; **Mr. D. J. Squire**, Scunthorpe, South Humberside; **Steve Wright**, Nuneaton, Warwickshire; **Ian Morse**, Bedfont, Middx; **Iain Lowson**, Hillhead, Glasgow; **John Evans**, Merseyside; **Edward J. Graft**, Wolverhampton, West Midlands; **M. McSwiggan**, St.Andrews, Guernsey.

STRIDING OFF WITH PRIZES

The ten people listed below will shortly be receiving T-shirts and posters for U.S.Gold's game *Strider*: **Simon Baxter**, Firswood, Manchester; **Michael K. Lysons**, Widnes, Cheshire; **Sean Miller**, Carshalton, Surrey; **Mark Clewlow**, Rugeley, Staffs; **Richard Bamforth**, Halifax, West Yorkshire; **Robert Gowans**, Chigwell Row, Essex; **John Waterhouse**, Chester; **Mark Isan**, Blackpool, Lancs; **D. Cowie**, Cleethorpes, S. Humberside; **David Richardson**, Sutton-in-Ashfield, Notts.

FOOTBALL CRAZE

These ten lucky people will be receiving *Subbuteo kits* courtesy of Impressions, who are celebrating the launch of their football game, *Superleague Soccer*: **Jason Carty**, Wood Green, London; **John Evans**, Merseyside; **Graham Clarke**, Melksham, Wiltshire; **Neil Stewart**, Cramlington, Northumberland; **Hans S. Berbes**, Västerås, Sweden; **Giles Newman**, Ipswich, Suffolk; **Colin Owen**, Cærnarvon, Gwynedd; **Mark Shaw**, Cannock, Staffs; **James Solomon**, W.Hagley, W.Mids; **Simon Parry**, Bodorgon, Gwynedd.

GOLDEN GRANDSLAM

After entering our recent Grandslam Giveaway, which celebrates the launch of the *Saint and Greavsie Trivia Quiz Game*, **Ralph Burton** of Oberreiden, Switzerland, will soon be the proud possessor of a match quality football signed by Saint and Greavsie. The following five people will receive the Saint and Greavsie board game: **G. Aldis**, Hemel Hempstead, Herts; **Ian Whiting**, Worcester; **C. J. Beaumont**, Yarm, Cleveland; **David Deans**, St. Albans, Herts; **Ian Skidmore**, Bingham, Notts.

Meanwhile, back at the ranch, this lucky quintet get the Saint and Greavsie computer games: **Robert Barrington**, Uttoxeter, Staffs.; **Andrew Robinson**, Bideford, N. Devon; **Ross Higgins**, Waderbridge, Cornwall; **Greg Oakes**, Sudbury, Suffolk; **James Solomon**, W. Hagley, W. Mids.

GHOSTLY GOINGS ON

Of the brave people who dared to enter our Level 9 *Scapeghost* compo, the following five leave alive with copies of the game: **Kim Castermans**, Diepenbeek, Belgium; **Ian Wilding**, Upholland, Lancs; **Linda Bradley**, Skelmersdale, Lancs; **Vipul Solanki**, Forest Gate, London; **David Couldwell**, Stocksbridge, Sheffield.

BRUCE LEE ALIVE AND KICKING!

I hope that **Dominic Martynes** of Manor Park, London, has got a video recorder because he's just won all of the Bruce Lee videos plus Mindscape's great game, *Bruce Lee Lives!*

These ten people can karate chop their way through a copy of the game: **Mark Chamberlain**, Norwich, Norfolk; **David Whiting**, Knowle, Bristol; **Lee Andrews**, Cardiff, S. Wales; **Colin Young**, Kirkintilloch, Glasgow; **Ken Suen**, Erdington, Birmingham; **Simon Sookdeb**, Kingsbury, London; **Dylon W. Soulter**, Gwynedd, N. Wales; **Steven Gallagher**, Canterbury, Kent; **Mark Holowenko**, Moulton, Northampton; **David Susswein**, Eastbourne, E. Sussex.

FANTASTIC FERRARIS

Here are the five lucky winners of the remote control Ferrari F40s being given away by Domark to celebrate the launch of *Hard Drivin'*. We've also printed their 'witty and pertinent' phrases: **David Couldwell**, Stocksbridge, Sheffield – Don't drive near a red mini; **M. McSwiggan**, St. Andrews, Guernsey – No red Ferrari? Drive Atari!; **Kevin Whitefield**, Rochester, Kent – Take me on a daring drive; **Tony Swinburne**, West Hampstead – The ravin' mad fender king; **Mr. S. A. Siddiqui**, Chiswick, London – Divine red Ferrari at Domark.

Th...th...that's all folks!

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AMIGA CONTACTS wanted, worldwide. Write to : Agent Steel, Adenauer - laan 43, 3527RA Utrecht, Holland. Fast reply, don't be shy!!

Amiga contacts wanted, 200% reply, fast and reliable, send lists toSimon, 16 Church View, Burton Latimer, North Hants.NN15 5LG.

Amiga contacts wanted latest stuff only, 100% reply Jason, 1 Henderson Street, Bridge of Allan, Stirling, Scotland. FK9 4NA or telephone 0786 832841.

PC CONTACTS WANTED from the Twilight Zone. Write to Geoff Parker, 33 Sunnyside Ave, Wiltshire, Blackburn BB1 9LW LANCS, England.

AMIGA CONTACTS WANTED 100% reply send lists and disks to Ray 413 Gleneagles Ave, Rushey Mead Est, Leicester. LE4 7YJ England.

AMIGA CONTACTS wanted to swap latest stuff send lists to : Bernard, 31 Burghley Rd, Wimbledon, London SW19 5HL. 200% reply.

AMIGA CONTACTS WANTED all over the world, 101% reply. Write to Dino, 5 Wicklow Close, Shepshed, Nr L'boro, Leics. LE12 9 BJ.

AMIGA PENPALS WANTED 110% reply. Write to Jeff, 45 Westbury St, Laister Dyue, Bradford. BD4 8PB.

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PLEASE HELP WITH Police Quest 2. Will refund stamps. P. Darlin, 18 Woodall Ramble, Booragoon, Perth. WA 6154.

EXPERIENCED AMIGA USER NEEDED to help new owner with occasional problems. Write to C. Bernard :- 53 Guildford View, Norfolk Park, Sheffield. S2 2NW.

HELP WANTED for ST version of Raffles . Cheats or pokes for extra lifes as I am climbing up the wall - HELP!!

IBM owner offer help on Battle Tech, Bards Tale, Kings Quest !, 11, 111, Police Quest 1, Space Quest 1, 11, Leisure suit Larry 1, 11, Bionic commandos, Trojan, Ghosts N' Goblins, Ninja, Montezums Revenge and any other problems associated with IBM computers and compatibles, Plus contacts wanted to swap hints, tips games ect... Send disks and list to : Paul Chew, 28 Inveraray Cresent, Hamersley, Perth, Western Australia, 6022.

BLOODWYCH (ATARI ST) where is the Iron Key on Level one ? Desperate, please help. Telephone RAE 0224 734723 NOW!!!

CAN ANYONE OUT THERE HELP ME with the new game for the SEGA MASTER SYSTEM called "Spellcaster", I cannot find the Vajira but I can find every other weapon. I also need to know the exact location of the Vajira and the enemy you fight in the Pyramid. I also need to know how to find all the defense weapons.

Could you send your replies to Glen McLauchlan, 12c Swallow Rd, Faifley, Clydebank, G81 5BW. I can also give help for a lot of other Sega games.

TI99/4A assistance, programming, games, supplies, contacts, free help, SAE Stephen Shaw, 10 Alstone Rd, Stockport, Ches.

WANTED

Chase HQ computer game wanted for Spectrum+3 computer (disk). Tel:Ald 850903 Please!!

Require space quest one with or wihout hints book compatible with IBM PC ect.Cash paid.

Any old or disused computer software for cash. SAE: ISG 104 Church St,Stoke on Trent, Staffs Tel: 0782 747174. (tapes/disks...)

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Rules:

All entries must be received by the closing date for this round of March 27th1990.

No employees of EMAP, or of any company involved in the production, distribution, or sale of ACE Magazine are eligible for entry.

Only one entry per household.

The decision of the judges is final and correspondence cannot be entered into.

WHAT YOU HAVE TO DO

Check out page 106 for tips on how to win with the ACE Stockmarket, then fill in the form with your predictions for next month's charts.

There's £25.00 worth of software for your machine waiting for the entry who gets closest to predicting the correct entries in each category. In the case of a tie, the winner will be the entry picked at random from the correct qualifying entries. If anyone gets ALL five entries right in ANY category, they win a JACKPOT PRIZE of £150 worth of software for their machine. And remember – under the new prize conditions, we award prizes EVERY MONTH!

A photocopy of this form (or a neatly laid out postcard) is acceptable.

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All you have to do is send off the form below, together with your payment; Entries to the Pink Pages cost just £4.00 each. (Except for helpline which is free).

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The BLITTER END

THE SECRET'S OUT!

Or is it? Last month's Blitter carried a piece about Steve Franklin of Commodore, who bullishly declared the existence of a secret weapon which would keep the Japanese console invasion at bay.

Since then, there has been no elaboration from Commodore on what this secret weapon might be (no, it's not David Jensen – that cheque in the picture is for charity, not for repelling the Japanese). Blitter, however, has an inkling of what could be in the wind.

Punters at this year's CES show (see report in this issue on page 18) were beguiled by reports of cartridge software for the C64. This doesn't sound particularly interesting, except that it would enable Commodore to produce at very little cost a small plastic box with a cartridge slot, two joystick ports, a video outlet, and a power socket.

This box would run games like *Boulderdash*, *Impossible Mission*, *Elite*, and *Mercenary*. Well, it would if the programmers of some of these titles could be persuaded to produce joystick only versions.

Boxes like these are called consoles, and Commodore – if the rumours are to be believed – may well think they've got a Nintendo beater on their hands.

There are, unfortunately, two flaws in this philosophy. The first is that for many punters the word console does not mean cheap plastic box with great games anymore. It means not-so-cheap-plastic box with state-of-the-art graphics and sound technology and a smaller number of technically impressive titles.

The second flaw has already been pointed out by Blitter in previous issues. If Nintendo decide to enter the European market (and Blitter doesn't believe they will – but more of that another month), they will do so in force. The company are now in a position to GIVE AWAY their NES console to everyone who can jump the queue at Dixons, provided, of course, that the punter pays out £30 for his first game cartridge. From then, Nintendo will reap yet more profits from the sale of further titles.

Faced with the technological snobbishness of today's console buyer and the sheer weight of the world's largest cash mountain, it's difficult to imagine anyone – including Commodore – winning the battle. Stand by for more on this next month...

●

QED recently showed a TV program which purported to examine the computer game phenomenon. What we got instead was yet another diatribe against gamesters, who, it appears, are turning their brains to custard by sitting staring at the TV all day.

This is a bit of a joke, isn't it? A TV program telling us that watching too much TV is not a good thing? At least with games you interact with, get involved with, and have a degree of control over the medium. With TV, however, you just have to sit and swallow it.

Question: if you had to choose a Prime Minister from **either** the ranks of those who watch Neighbours and Coronation Street all the time **or** from the ranks of those who can demonstrate a high score in Dungeon Master, which group would you favour? No contest. Q.E.D.

●

On the other hand, perhaps QED have a point. At CES, representatives of the UK software industry put up a good show for themselves. Led by someone who shall remain nameless, they drank themselves into the ground, sang 'Brits on the piss', and then disappeared into The Palamino to ogle naked women. Just shows you what a diet of games software can do to the soul.

Blit-Blit!

YANKEE DOODLE!

Boy, have we got a special issue lined up for you!

Next month, we're sending intrepid ACE reporters to the US of A to bring you red hot coverage of some of the most exciting games developments on the West Coast.

We're planning the itinerary now as we go to press, but we expect to be providing you with an exclusive glimpse of George Lucas' ranch and the CD-I development projects underway at Lucasfilms, Electronic Arts, Cinemaware, and AIM – American Interactive Media.

Best of all for some readers, however, will be a sneak peek at the development work now being carried on by Robyn and Rand Miller of Cyan – the team who brought you Cosmic Osmo.

Don't miss next month's ACE – taking you to the far frontiers of computer entertainment.

Ooops!

Blitter would never be complete without an Ooops or two. Last month the Arcade Pages succumbed to the printer's curse: they were printed the wrong way round! Whoopsy daisy...

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